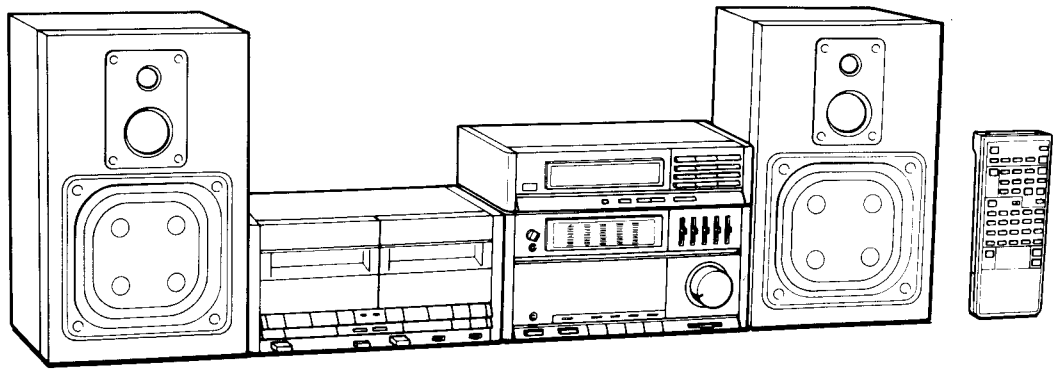


MHC-3000

SERVICE MANUAL

AEP Model



- MHC-3000 is composed of following models.
As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR MHC-3000

TUNER	ST-707RM
CASSETTE DECK	TC-WR808M
AMPLIFIER	TA-808M

ACCESSORIES SUPPLIED

RM-808 Remote Commander (1)
Sony SUM-3(NS) batteries (2)
Flat cord (1)
CD player connecting cord (1)

PARTS LIST

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-463-979-11	REMOTE COMMANDER (RM-808)
1-501-369-11	ANTENNA
1-558-233-11	CORD (WITH CONNECTOR) (SIRCS) 4P
1-559-821-11	CORD (WITH CONNECTOR)
3-769-866-11	MANUAL, INSTRUCTION
3-769-866-41	MANUAL, INSTRUCTION
*4-922-776-01	INDIVIDUAL CARTON
*4-925-560-01	CUSHION, UPPER
*4-925-561-01	CUSHION, LOWER

- ▶ Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

COMPACT HI-DENSITY
COMPONENT SYSTEM
SONY[®]



9-953-229-11

Sony Corporation
Audio Group

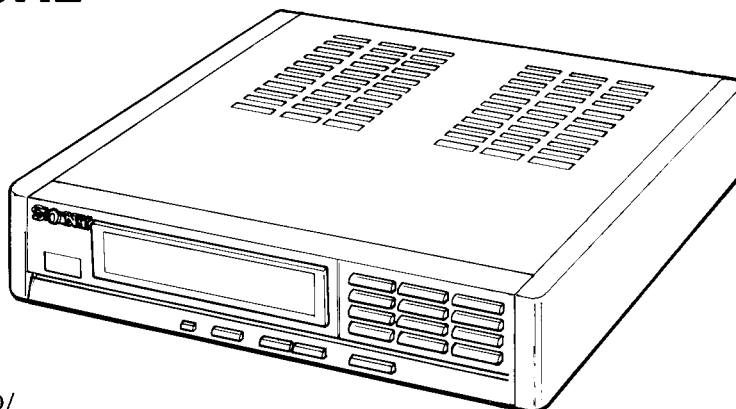
English
88C0644-1
Printed in Japan
© 1988.3

Published by A/V Engineering Service Dept.

ST-707RM

SERVICE MANUAL

AEP Model



. ST-707RM is the FM STEREO/
FM-AM TUNER in MHC-2000/
MHC-3000.

SPECIFICATIONS

System FM stereo, FM/AM superheterodyne tuner
Quartz-locked PLL digital synthesizer system

General

Dimensions Approx. 245 × 55 × 240 mm (w/h/d)
(9³/₄ × 2¹/₄ × 9¹/₂ inches)
incl. projecting parts and controls
Weight Approx. 1.0 kg (2 lb 4 oz) net

FM tuner section

Tuning range 87.5 to 108 MHz
Antenna terminals 75 ohms unbalanced
Intermediate frequency 10.7 MHz
Usable sensitivity 2.3 μ V (S/N = 30 dB/75 ohms)

MW/LW tuner section

		MW	LW
Tuning range		531 – 1,602 kHz (except Italy) 522 – 1,611 kHz (for Italy)	153 – 281 kHz (except Italy) 144 – 288 kHz (for Italy)
Antenna		Built-in ferrite bar antenna External antenna terminal	
Usable sensitivity	Built-in ferrite bar antenna	250 μ V/m (999 kHz)	500 μ V/m (230 kHz)
	External antenna	100 μ V (999 kHz)	150 μ V (230 kHz)
Signal-to-noise ratio		52 dB (50 mW/m)	
Harmonic distortion		0.3% (50 mV/m, 400 Hz)	

FM STEREO/FM-AM TUNER
SONY®

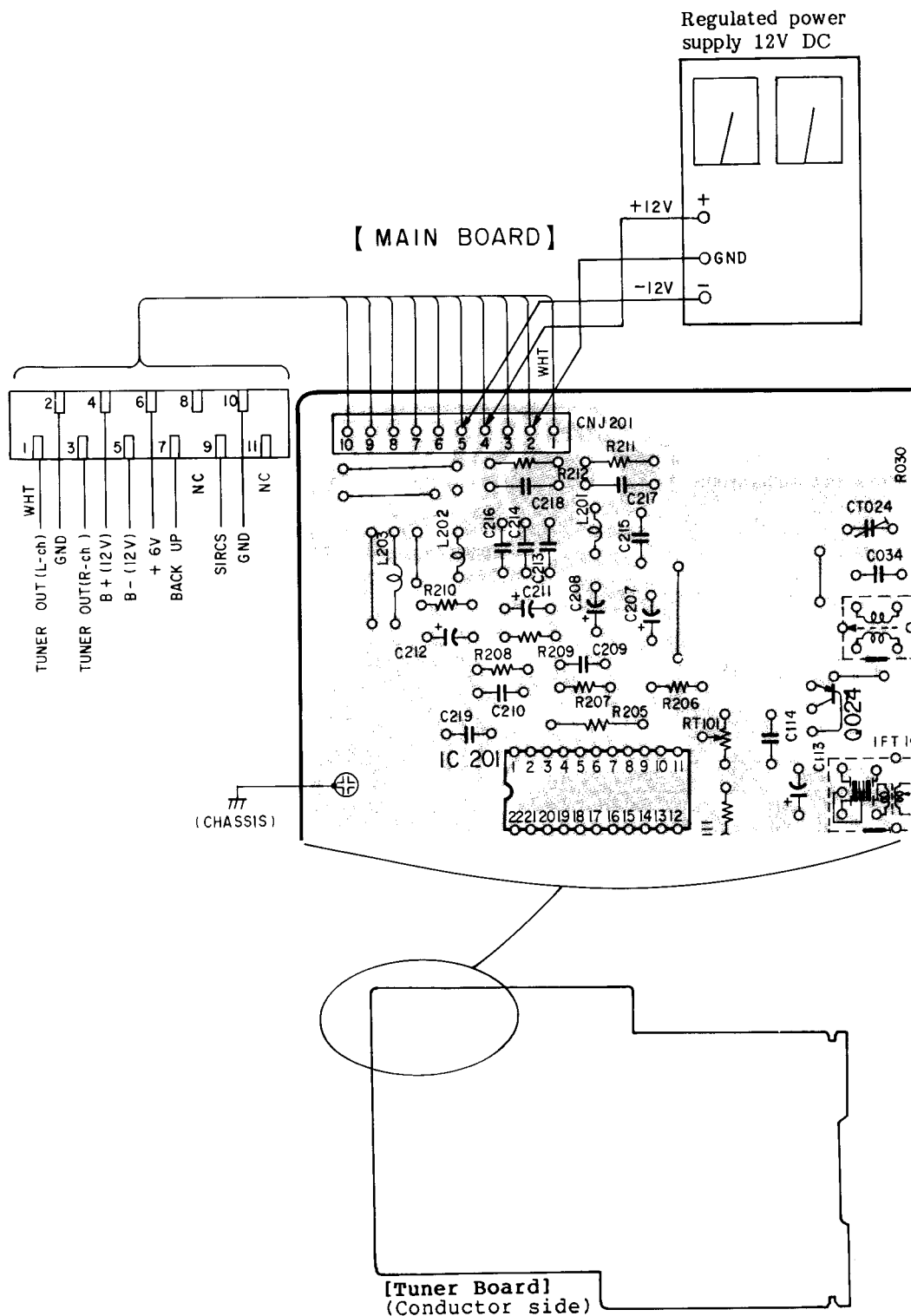


REPAIRING PRECAUTION

[To apply B+ voltage]

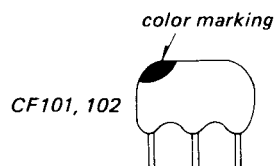
The power of this units is fed from other unit.

When the unit operates individually, connect the regulated power supply to the point as shown in the below figure.



Note on Ceramic Filter (CF101, 102) Replacement and Diode D314, 315 Connection.

This set employs two ceramic filters (CF101, 102) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by diodes (D314, 315) connection is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



○: connect
X: not connect

Ceramic filter		D314, 315 connection		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	※ A (D314)	※ B (D315)	
White	10.750	○	×	10.750
Red	10.700	×	×	10.700
Black	10.650	×	○	10.650

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i.e., of same color coding should be used for CF101 and CF102.

When replacing the ceramic filters, perform the FM Discriminator Adjustment.

WARNING !!

ADVARSEL!

Lithiumbatteri – Eksplosionsfare
Udskiftning må kun foretages
af en sagkyndig, og som
beskrevet i servicemanualen.

LITHIUM BATTERY

SHOULD ONLY BE CHANGED BY TECHNICAL PERSONNEL. THERE IS A RISK FOR EXPLOSION AT A WRONG HANDLING.

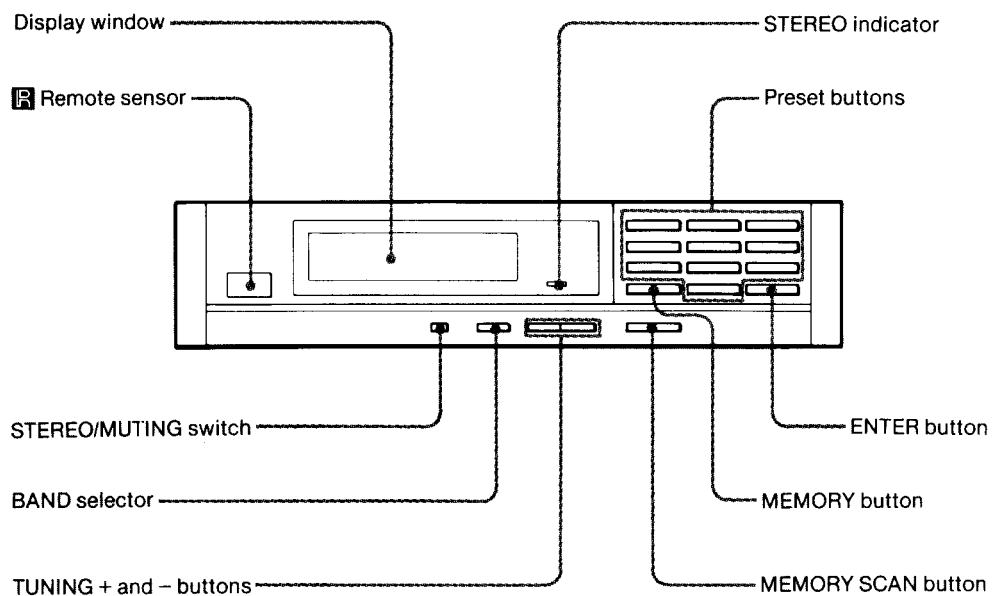
“Batteriet må kun udskiftes med et batteri af samme fabrikat og type”.

Because of the risk for explosion the battery must be replaced with the same type and manufacture.

MODEL IDENTIFICATION

SONY® MODEL NO. **ST-707RM**
FM STEREO/FM-AM TUNER

PARTS IDENTIFICATION



SECTION 1

ELECTRICAL ADJUSTMENTS

FM SECTION

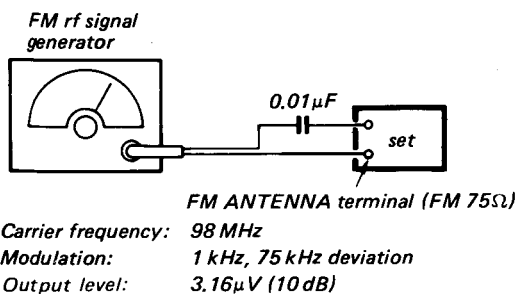
Setting:

BAND selector switch: FM

Note: FM discriminator alignment should be made after FM tracking adjustment.

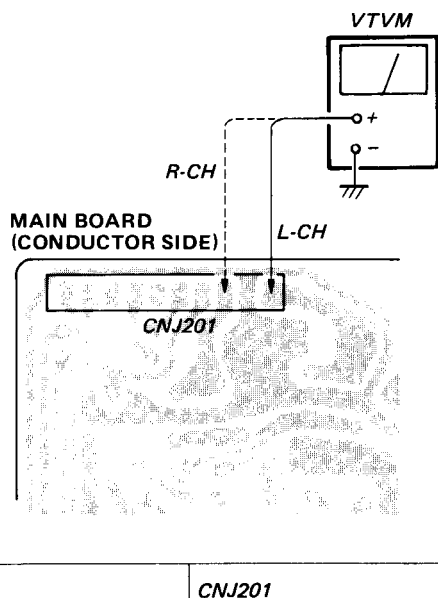
FM Tracking Adjustment

Setting:



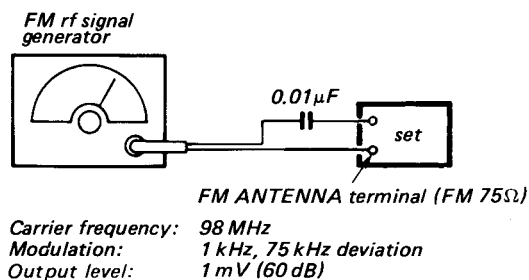
Procedure:

1. Push TUNING (+, -) button for 98 MHz.
2. Approach L002 and L003 not to contact each other.
3. Adjust L001 and L003, and repeat the adjustment 2 – 3 times for maximum VTVM reading.

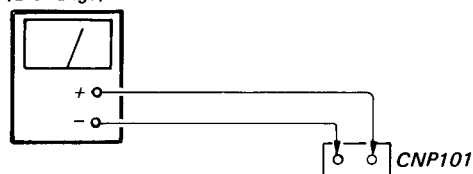


FM Discriminator Alignment (NULL Check)

Setting:

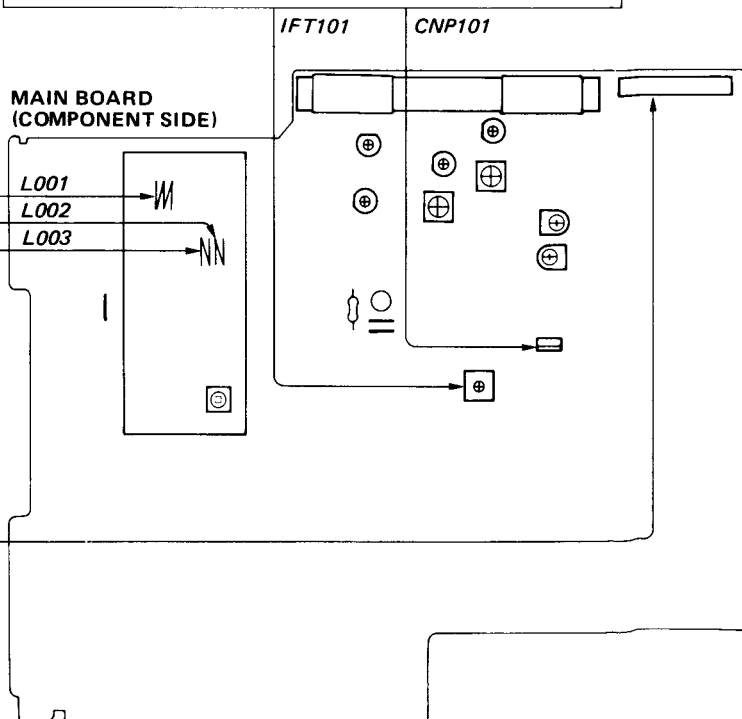


VOM
(DC range)



Procedure:

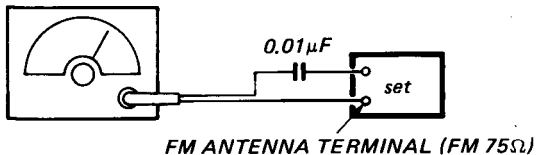
1. Push the TUNING (+, -) button for 98 MHz.
2. Adjust IFT101 for 0 V reading on the VOM.



FM OSC Voltage Adjustment

Setting:

FM rf signal generator



Carrier frequency: 108 MHz

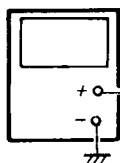
Modulation: 1 kHz, 75 kHz deviation

Output level: as low as possible

Procedure:

1. Push the TUNING (+, -) button for 108 MHz.
2. Adjust L005 for 8 – 8.5 V reading on the VOM.

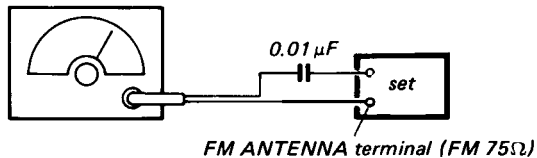
VOM
(DC range)



FM TUNED Indication Lighting Level Adjustment

Setting:

FM rf signal generator



Carrier frequency: 98 MHz

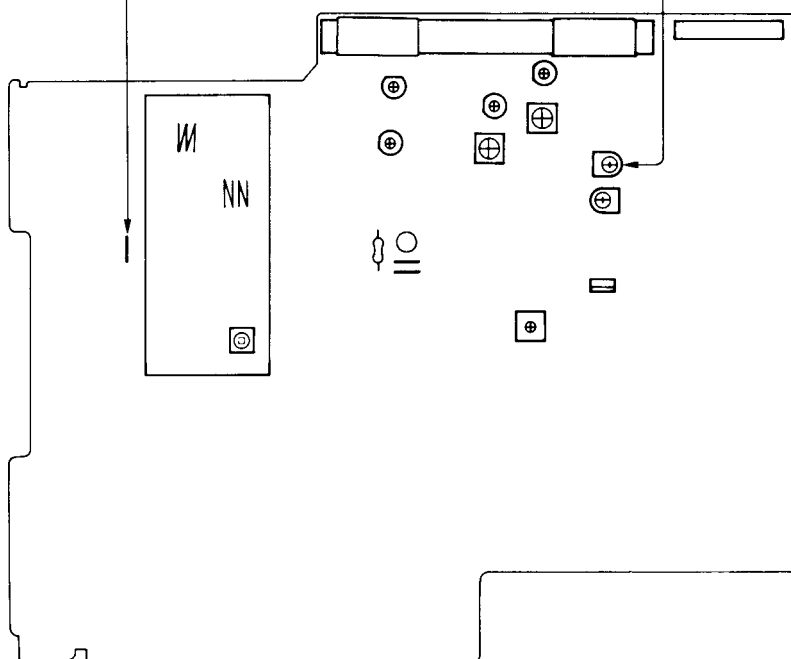
Modulation: 1 kHz, 75 kHz deviation

Output level: 22.4μV (27 dB)

Procedure:

1. Confirm that the MUTING indicator lights up on the display window.
2. Tune the set to 98 MHz.
3. Adjust RT101 so that the TUNED indicator goes on.

MAIN BOARD (COMPONENT SIDE)

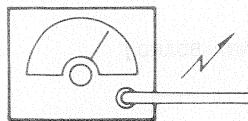


AM SECTION

Setting:

BAND selector switch: MW or LW

AM rf signal generator



30% amplitude modulation by 400 Hz signal

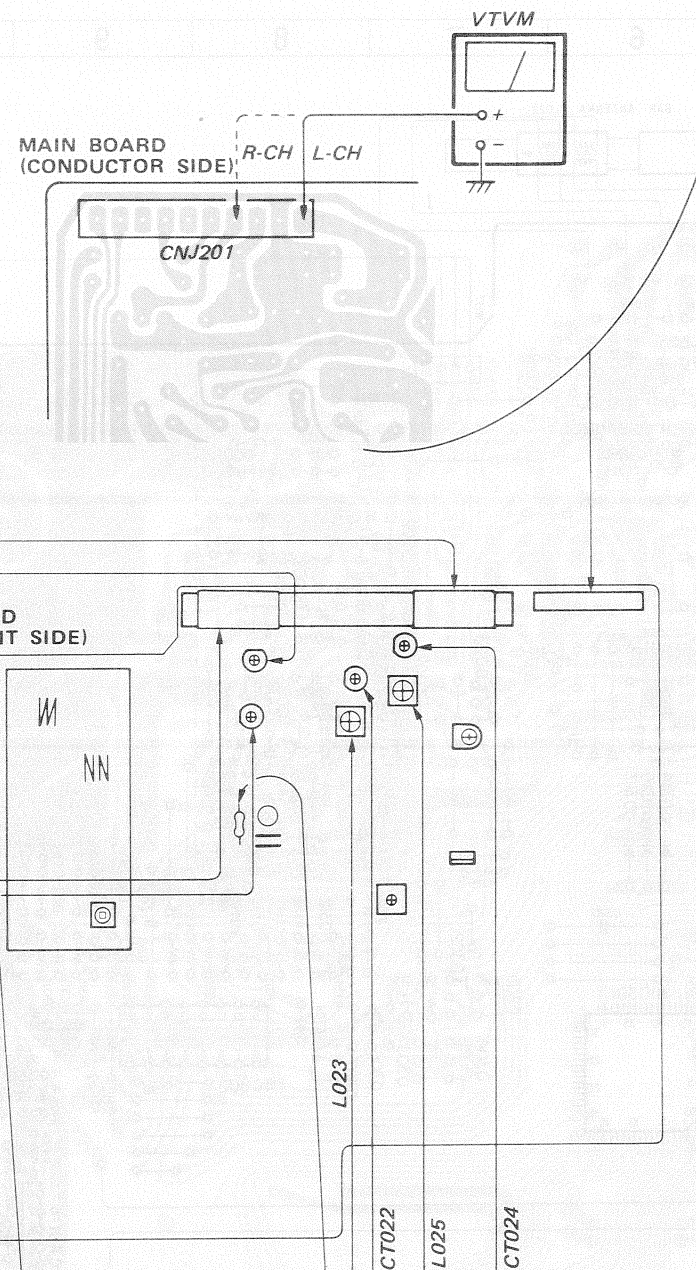
Put the lead-wire antenna close to the set.

- Repeat the procedures in each adjustment several times, and the OSC voltage and tracking adjustments should be finally done by the trimmer capacitors.

• Perform after LW TRACKING ADJUSTMENT.

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
603 kHz	L022
1,404 kHz	CT021

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
162 kHz	L022
270 kHz	CT023

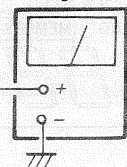


MW/LW OSC Voltage Adjustment

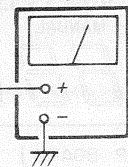
Procedure:

1. Set BAND selector switch to MW.
2. Push TUNING (+, -) button for 522 kHz. Adjust L023 for 1 - 1.1 V VOM ② reading.
3. Push the button for 1,611 kHz. Adjust CT022 for 8 - 8.5 V VOM ② reading.
4. Set BAND selector switch to LW.
5. Push TUNING (+, -) button for 144 kHz. Adjust L025 for 1 - 1.1 V VOM ① reading.
6. Push the button for 288 kHz. Adjust CT024 for 8 - 8.5 V VOM ① reading.

VOM ② : MW (DC range)



VOM ① : LW (DC range)



MEMO

SECTION 2 DIAGRAMS

2-1. PRINTED WIRING BOARDS

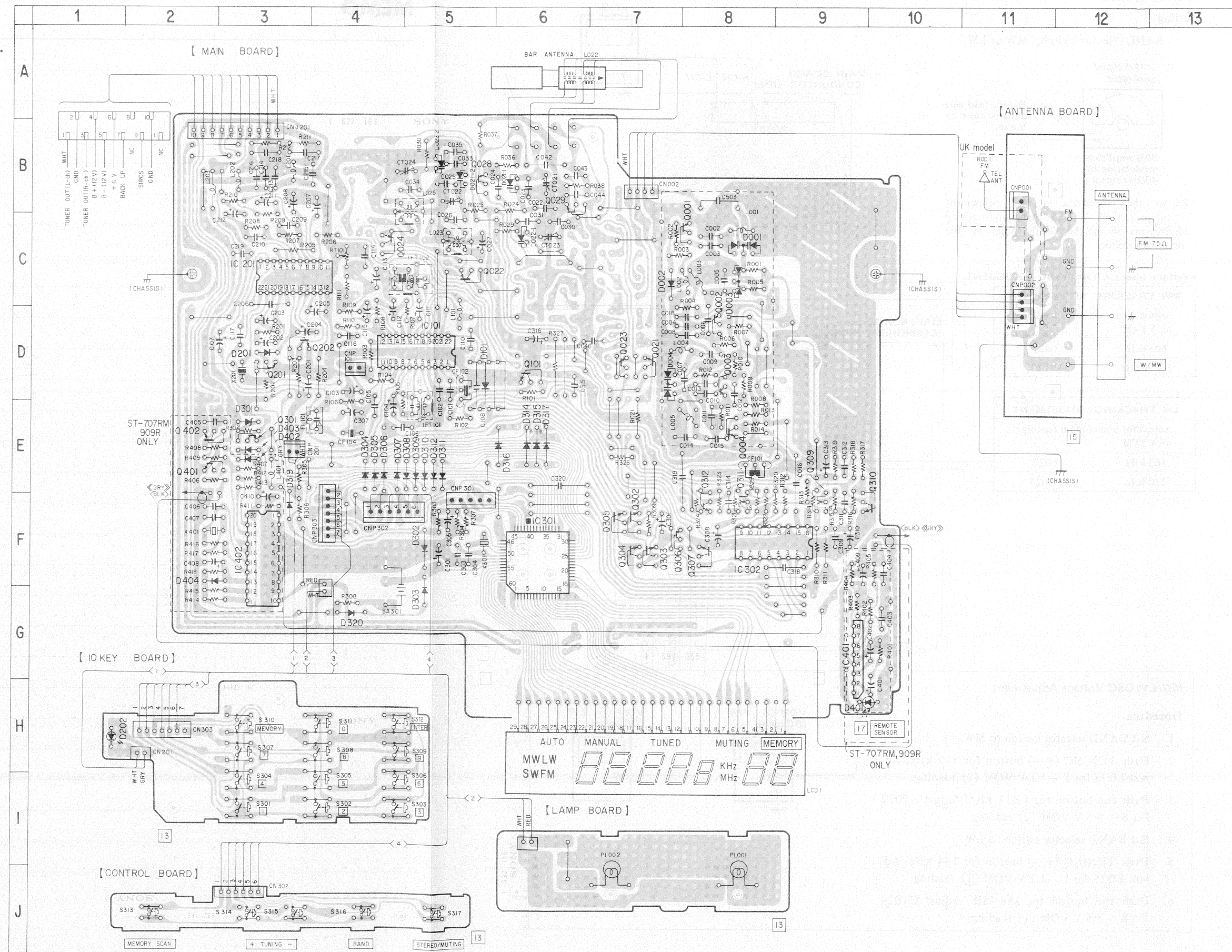
See page 14 for Semiconductor Lead Layouts.

Note:

-  : parts mounted on the conductor side.
-  indicates side identified with part number.

Semiconductor Location

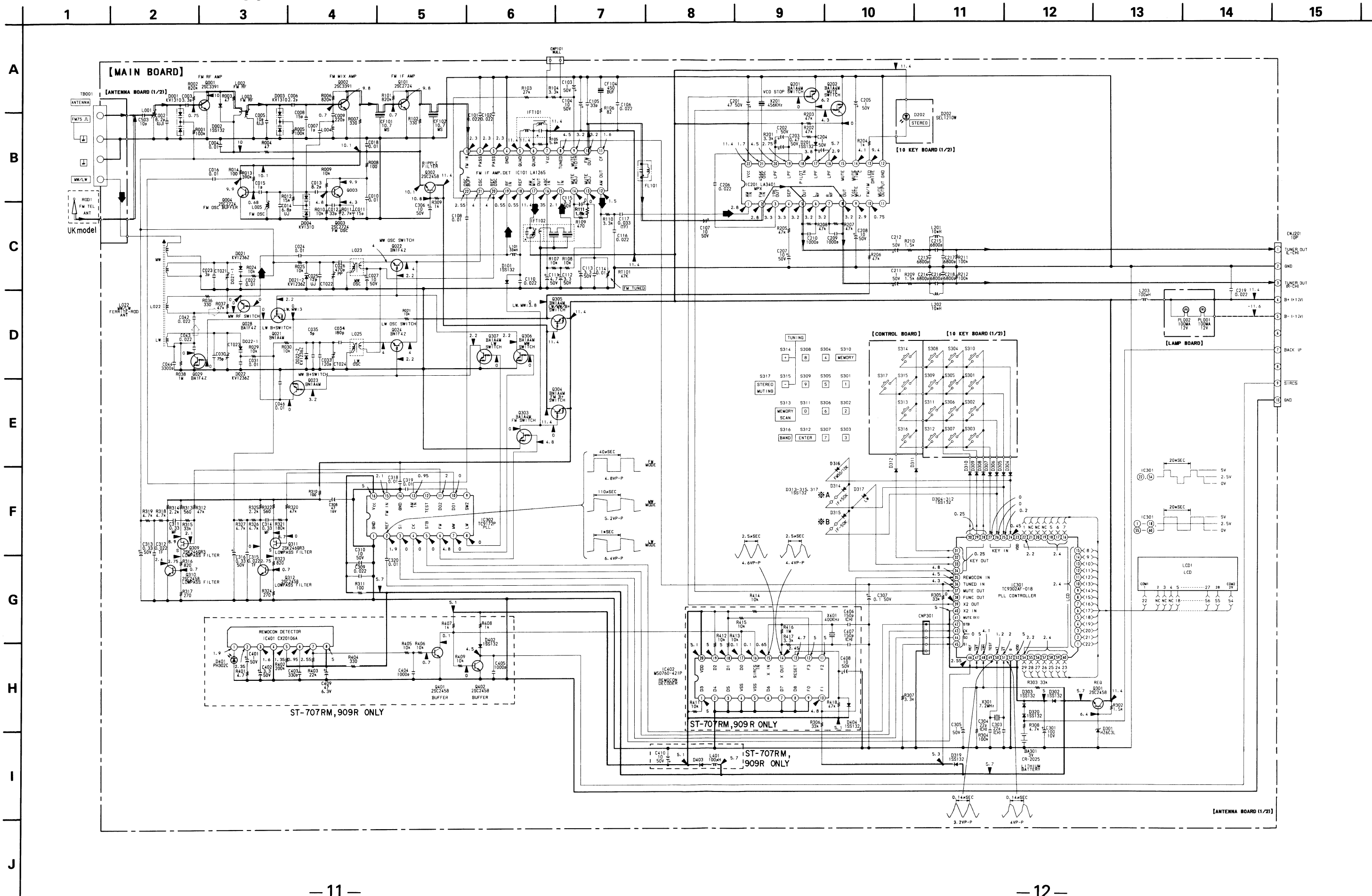
Ref. No.	Ref. No.	Ref. No.	Ref. No.
IC101	D-4	D004	D-7
IC201	C-3	D021-1	B-5
IC301	F-6	D021-2	B-5
IC302	F-8	D022-1	C-6
IC401	G-9	D022-2	B-5
IC402	F-3	D101	D-5
Q001	C-7	D201	D-3
Q002	D-8	D202	H-1
Q003	D-8	D301	E-3
Q004	E-8	D302	F-5
Q021	D-7	D303	F-5
Q022	C-5	D304	E-4
Q023	D-7	D305	E-4
Q024	C-4	D306	E-4
Q028	B-5	D307	E-4
Q029	B-6	D308	E-4
Q101	D-6	D309	E-4
Q201	D-3	D310	E-5
Q202	D-3	D311	E-5
Q301	E-3	D312	E-5
Q302	F-7	D314	E-6
Q303	F-7	D315	E-6
Q304	F-7	D316	E-5
Q305	F-7	D317	E-6
Q306	F-7	D319	F-3
Q307	F-7	D320	G-4
Q309	F-9	D401	H-9
Q310	F-9	D402	E-3
Q311	E-8	D403	E-3
Q312	E-8	D404	F-2
Q401	E-2		
D001	C-8		
D002	C-7		
D003	C-8		



ST-707RM ST-707RM

2-2. SCHEMATIC DIAGRAM

. See page 13 for note.



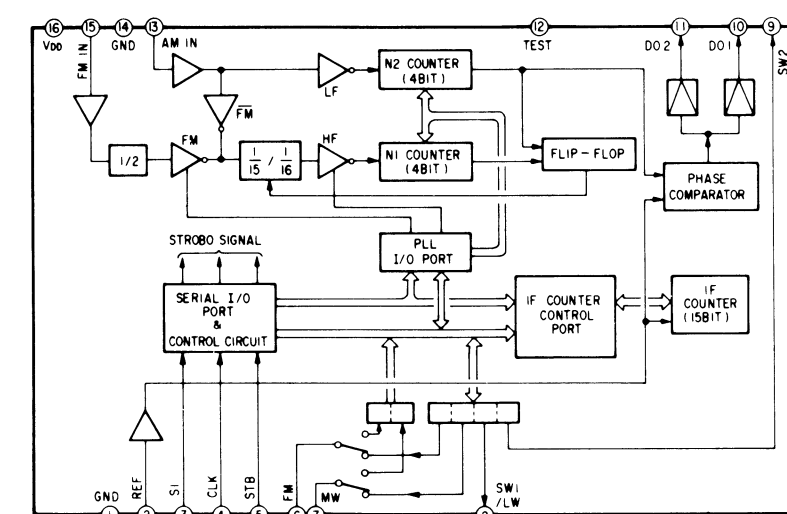
Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- *A-B: See page 3 "Note on ceramic filter replacement and diode connection".
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under detuned conditions with a VOM (50k Ω /V).
- No Mark: FM Mode
- Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken to ground in no-signal mode by using oscilloscope.
- Voltage variations may be noted due to normal production tolerances.
- --- : B+ bus.
- --- : B- bus.
- --- : adjustment for repair.
- --- : FM signal path.
- --- : MW signal path.
- --- : LW signal path.

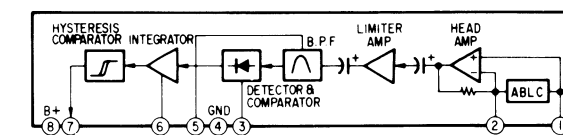
Switches:

Ref. No.	Switch	Position
S301	1	OFF
S302	2	OFF
S303	3	OFF
S304	4	OFF
S305	5	OFF
S306	6	OFF
S307	7	OFF
S308	8	OFF
S309	9	OFF
S310	MEMORY	OFF
S311	0	OFF
S312	ENTER	OFF
S313	MEMORY SCAN	OFF
S314	TUNING +	OFF
S315	TUNING -	OFF
S316	BAND	OFF
S317	STEREO MUTING	OFF

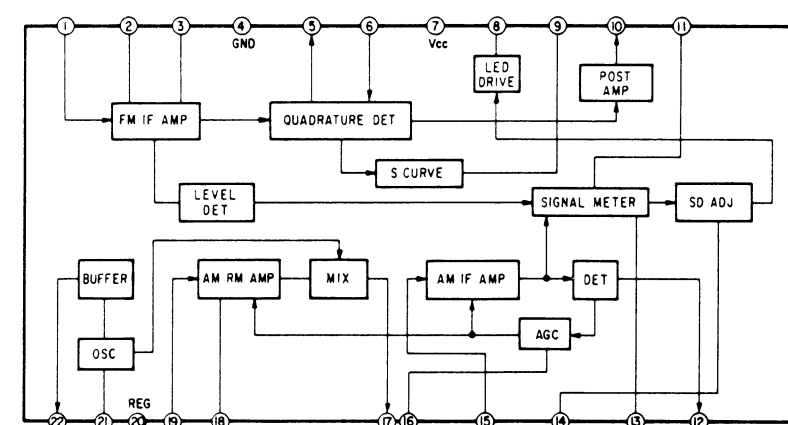
IC302 TC9172P



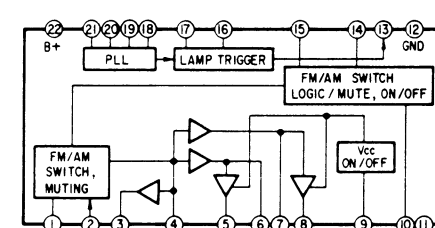
IC401 CX20106A



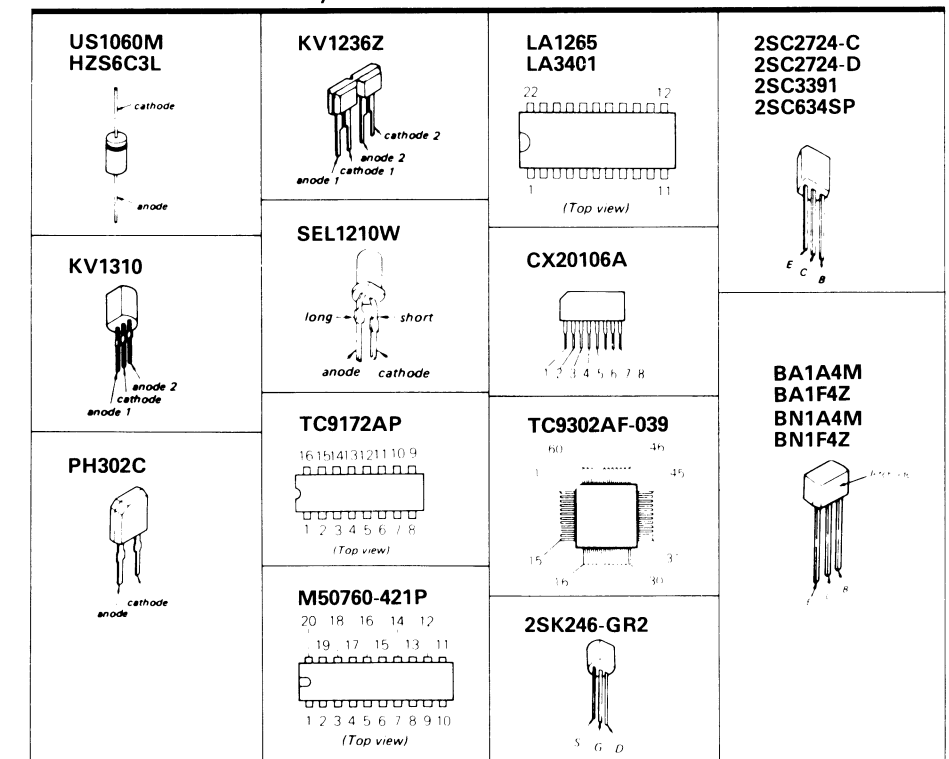
IC101 LA1265



IC201 LA3401



• Semiconductor Lead Layouts



SECTION 3

EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

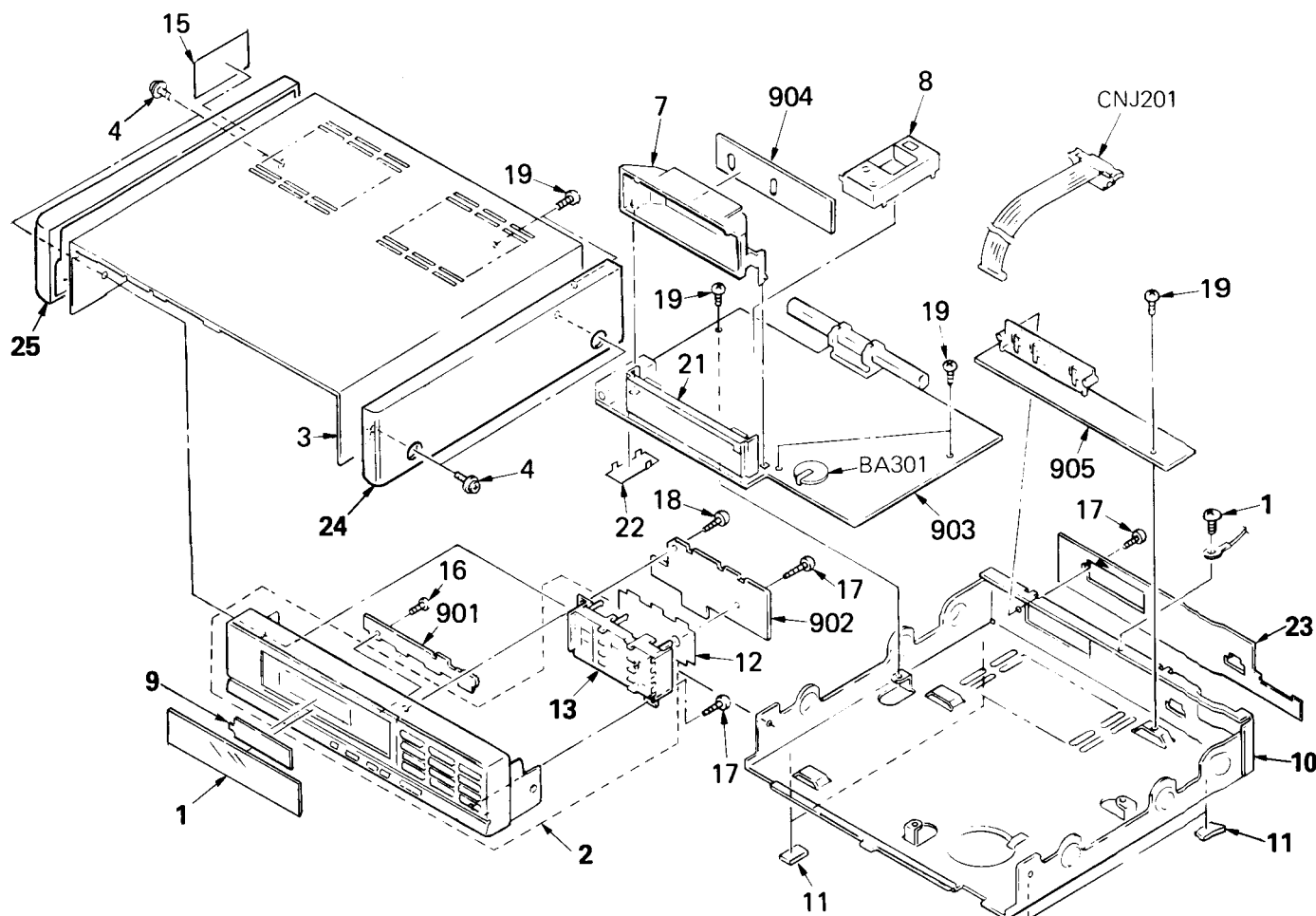
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)

Cabinet's Color

Parts Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.



No.	Part No.	Description
1	4-920-874-01	PLATE (ST), ORNAMENTAL
2	X-4919-643-1	PANEL ASSY, FRONT
3	4-920-137-01	CASE
4	4-886-821-51	SCREW (CASE) (M3X14)
5		
6	*4-909-705-01	PLATE, SHIELD
7	*4-917-275-01	HOUSE, LAMP
8	*4-874-704-01	CASE, SHIELD
9	4-920-872-01	PLATE (ST), INDICATION
10	*4-919-617-01	CHASSIS
11	4-919-608-01	FOOT
12	*4-919-607-01	SPACER
13	*4-919-614-01	RETAINER, BUTTON
15	*4-922-718-01	LABEL, MODEL NUMBER (AE)
16	7-685-133-19	SCREW +P 2.6X6 TYPE2 SLIT
17	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S

No.	Part No.	Description
18	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
19	7-682-147-01	SCREW +BVTP 3X6 (S)
20		
21	*4-909-633-01	ILLUMINATOR
22	*4-920-149-01	PLATE (A), SHIELD
23	*4-919-613-71	COVER, REAR
24	4-922-759-01	PLATE (A-RIGHT), SIDE
25	4-922-760-01	PLATE (A-LEFT), SIDE
901	*1-622-168-11	PC BOARD, CONTROL
902	*1-622-167-11	PC BOARD, 10 KEY
903	*A-4351-646-A	MOUNTED PCB, TUNER
904	*1-622-170-11	PC BOARD, LAMP
905	*1-622-169-11	PC BOARD, ANTENNA
BA301	1-528-120-00	BATTERY, LITHIUM (CR-2025)
CNJ201	1-559-816-11	CORD (WITH CONNECTOR) 10P

SECTION 4

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA....: μ A..., UPA....: μ PA...,UPC....: μ PC, UPD....: μ PD...

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description					Ref.No.	Part No.	Description				
901	*1-622-168-11	PC BOARD, CONTROL					C110	1-101-005-00	CERAMIC	0.022MF			50V
902	*1-622-167-11	PC BOARD, 10 KEY					C111	1-124-927-11	ELECT	4.7MF	20%		50V
903	*A-4351-646-A	MOUNTED PCB, TUNER					C112	1-123-382-00	ELECT	3.3MF	20%		50V
904	*1-622-170-11	PC BOARD, LAMP					C113	1-123-382-00	ELECT	3.3MF	20%		50V
905	*1-622-169-11	PC BOARD, ANTENNA					C114	1-161-379-00	CERAMIC	0.01MF	20%		16V
BA301	1-528-120-00	BATTERY, LITHIUM (CR-2025)					C115	1-123-382-00	ELECT	3.3MF	20%		50V
C002	1-162-198-31	CERAMIC	8.2PF	10%		50V	C116	1-101-005-00	CERAMIC	0.022MF			50V
C003	1-162-193-31	CERAMIC	3.3PF	10%		50V	C117	1-130-489-00	MYLAR	0.033MF	5%		50V
C004	1-161-379-00	CERAMIC	0.01MF	20%		16V	C201	1-124-477-11	ELECT	47MF	20%		16V
C005	1-162-199-31	CERAMIC	10PF	5%		50V	C202	1-124-499-11	ELECT	1MF	20%		50V
C006	1-162-191-31	CERAMIC	2.2PF	10%		50V	C203	1-124-902-00	ELECT	0.47MF	20%		50V
C007	1-162-187-31	CERAMIC	1PF	20%		50V	C204	1-124-499-11	ELECT	1MF	20%		50V
C008	1-162-203-31	CERAMIC	15PF	5%		50V	C205	1-124-499-11	ELECT	1MF	20%		50V
C009	1-162-286-31	CERAMIC	220PF	10%		50V	C206	1-161-494-00	CERAMIC	0.022MF	30%		25V
C010	1-161-379-00	CERAMIC	0.01MF	20%		16V	C207	1-123-875-11	ELECT	10MF	20%		50V
C011	1-162-203-31	CERAMIC	15PF	5%		50V	C208	1-123-875-11	ELECT	10MF	20%		50V
C012	1-162-211-31	CERAMIC	33PF	5%		50V	C209	1-102-074-00	CERAMIC	0.001MF	10%		50V
C013	1-162-198-31	CERAMIC	8.2PF	10%		50V	C210	1-102-074-00	CERAMIC	0.001MF	10%		50V
C014	1-162-197-31	CERAMIC	6.8PF	10%		50V	C211	1-124-499-11	ELECT	1MF	20%		50V
C015	1-162-187-31	CERAMIC	1PF	20%		50V	C212	1-124-499-11	ELECT	1MF	20%		50V
C016	1-161-379-00	CERAMIC	0.01MF	20%		16V	C213	1-161-329-00	CERAMIC	0.0068MF	20%		16V
C018	1-161-379-00	CERAMIC	0.01MF	20%		16V	C214	1-161-329-00	CERAMIC	0.0068MF	20%		16V
C022	1-161-379-00	CERAMIC	0.01MF	20%		16V	C215	1-161-329-00	CERAMIC	0.0068MF	20%		16V
C023	1-102-936-00	CERAMIC	3PF	0.25PF		50V	C216	1-161-329-00	CERAMIC	0.0068MF	20%		16V
C024	1-161-379-00	CERAMIC	0.01MF	20%		16V	C217	1-161-329-00	CERAMIC	0.0068MF	20%		16V
C025	1-102-949-00	CERAMIC	12PF	5%		50V	C218	1-161-329-00	CERAMIC	0.0068MF	20%		16V
C026	1-130-014-00	FILM	470PF	5%		50V	C219	1-101-005-00	CERAMIC	0.022MF			50V
C027	1-123-875-11	ELECT	10MF	20%		50V	C301	1-124-443-00	ELECT	100MF	20%		10V
C030	1-101-890-00	CERAMIC	75PF	5%		50V	C303	1-102-959-00	CERAMIC	22PF	5%		50V
C031	1-161-379-00	CERAMIC	0.01MF	20%		16V	C304	1-102-959-00	CERAMIC	22PF	5%		50V
C033	1-102-816-00	CERAMIC	120PF	5%		50V	C305	1-124-499-11	ELECT	1MF	20%		50V
C034	1-130-047-00	FILM	180PF	5%		50V	C306	1-123-875-11	ELECT	10MF	20%		50V
C035	1-102-942-00	CERAMIC	5PF	0.5PF		50V	C307	1-124-463-00	ELECT	0.1MF	20%		50V
C042	1-161-494-00	CERAMIC	0.022MF	30%		25V	C308	1-124-477-11	ELECT	47MF	20%		16V
C043	1-101-005-00	CERAMIC	0.022MF			50V	C309	1-101-005-00	CERAMIC	0.022MF			50V
C044	1-161-327-00	CERAMIC	0.0033MF	20%		16V	C310	1-123-875-11	ELECT	10MF	20%		50V
C046	1-161-379-00	CERAMIC	0.01MF	20%		16V	C311	1-136-171-00	FILM	0.33MF	5%		50V
C101	1-101-005-00	CERAMIC	0.022MF			50V	C312	1-130-487-00	MYLAR	0.022MF	5%		50V
C102	1-101-005-00	CERAMIC	0.022MF			50V	C313	1-124-252-00	ELECT	0.33MF	20%		50V
C103	1-124-499-11	ELECT	1MF	20%		50V	C314	1-136-171-00	FILM	0.33MF	5%		50V
C104	1-123-875-11	ELECT	10MF	20%		50V	C315	1-130-487-00	MYLAR	0.022MF	5%		50V
C105	1-162-211-31	CERAMIC	33PF	5%		50V	C316	1-124-252-00	ELECT	0.33MF	20%		50V
C106	1-101-005-00	CERAMIC	0.022MF			50V	C318	1-161-379-00	CERAMIC	0.01MF	20%		16V
C107	1-123-875-11	ELECT	10MF	20%		50V	C319	1-161-379-00	CERAMIC	0.01MF	20%		16V
C108	1-161-379-00	CERAMIC	0.01MF	20%		16V	C320	1-161-379-00	CERAMIC	0.01MF	20%		16V

Ref.No.	Part No.	Description
C401	1-124-499-11	ELECT 1MF 20% 50V
C402	1-123-382-00	ELECT 3.3MF 20% 50V
C403	1-162-288-31	CERAMIC 330PF 10% 50V
C404	1-162-294-31	CERAMIC 0.001MF 10% 50V
C405	1-162-294-31	CERAMIC 0.001MF 10% 50V
C406	1-101-361-00	CERAMIC 150PF 5% 50V
C407	1-101-361-00	CERAMIC 150PF 5% 50V
C408	1-123-875-11	ELECT 10MF 20% 50V
C409	1-124-477-11	ELECT 47MF 20% 16V
C410	1-123-875-11	ELECT 10MF 20% 50V
C503	1-162-199-31	CERAMIC 10PF 5% 50V
CF101	1-567-389-11	FILTER, CERAMIC
CF102	1-567-389-11	FILTER, CERAMIC
CF104	1-527-981-00	FILTER, CERAMIC
CNJ201	1-559-816-11	CORD (WITH CONNECTOR)
CNP002*1-564-337-00		PIN, CONNECTOR 3P
CNP101*1-560-060-00		PIN, CONNECTOR 2P
CNP201*1-564-336-00		PIN, CONNECTOR 2P
CNP301*1-560-063-00		PIN, CONNECTOR 5P
CNP302*1-560-064-00		PIN, CONNECTOR 6P
CNP303*1-564-341-11		PIN, CONNECTOR 7P
CT021	1-141-227-00	CAP, CERAMIC TRIMMER
CT022	1-141-227-00	CAP, CERAMIC TRIMMER
CT023	1-141-227-00	CAP, CERAMIC TRIMMER
CT024	1-141-227-00	CAP, CERAMIC TRIMMER
D001	8-719-918-45	DIODE KV1310
D002	8-719-000-26	DIODE US1060M
D003	8-719-918-45	DIODE KV1310
D004	8-719-918-45	DIODE KV1310
D021	8-719-923-64	DIODE KV1236Z
D022	8-719-923-64	DIODE KV1236Z
D101	8-719-000-26	DIODE US1060M
D201	8-719-000-26	DIODE US1060M
D202	8-719-303-13	DIODE SEL1210W
D301	8-719-933-41	DIODE HZS6C3L
D302	8-719-000-26	DIODE US1060M
D303	8-719-000-26	DIODE US1060M
D304	8-719-000-26	DIODE US1060M
D305	8-719-000-26	DIODE US1060M
D306	8-719-000-26	DIODE US1060M
D307	8-719-000-26	DIODE US1060M
D308	8-719-000-26	DIODE US1060M
D309	8-719-000-26	DIODE US1060M
D310	8-719-000-26	DIODE US1060M
D311	8-719-000-26	DIODE US1060M
D312	8-719-000-26	DIODE US1060M
D314	8-719-000-26	DIODE US1060M
D315	8-719-000-26	DIODE US1060M
D316	8-719-000-26	DIODE US1060M
D317	8-719-000-26	DIODE US1060M
D319	8-719-000-26	DIODE US1060M
D320	8-719-000-26	DIODE US1060M
D401	8-719-123-68	PH302C
D402	8-719-000-26	DIODE US1060M
D403	8-719-000-26	DIODE US1060M
D404	8-719-000-26	DIODE US1060M
FL101	1-235-126-00	ENCAPSULATED COMPONENT
IC101	8-759-801-81	IC LA1265
IC201	8-759-801-80	IC LA3401
IC301	8-759-230-50	IC TC9302AF-039

Ref.No.	Part No.	Description
IC302	8-759-230-16	IC TC9172AP
IC401	8-759-602-54	IC CX20106A
IC402	8-759-603-43	IC M50760-421P
IFT101	1-404-659-11	COIL, DISCRIMINATOR
IFT102	1-404-713-11	TRANSFORMER, IF
L001	*1-422-336-11	COIL, AIR-CORE
L002	*1-422-040-00	COIL, AIR-CORE
L003	*1-422-081-00	COIL (WITH CORE)
L004	*1-422-039-00	COIL, AIR-CORE
L005	1-459-396-00	COIL (WITH CORE)
L022	1-402-151-11	ANTENNA, FERRITE-ROD (LW/MW)
L023	1-406-089-11	COIL (OSC)
L025	1-406-207-11	COIL, LW (OSC)
L101	1-408-930-00	INDUCTOR 33MMH
L201	1-408-924-00	INDUCTOR 10MMH
L202	1-408-924-00	INDUCTOR 10MMH
L203	1-410-601-21	INDUCTOR 100UH
L401	1-410-601-21	INDUCTOR 100UH
LCD1	1-807-453-41	DISPLAY PANEL, LIQUID CRYSTAL
PL001	1-518-527-51	LAMP, PILOT
PL002	1-518-527-51	LAMP, PILOT
Q001	8-729-304-38	TRANSISTOR 2SC3391
Q002	8-729-304-38	TRANSISTOR 2SC3391
Q003	8-729-672-42	TRANSISTOR 2SC2724-C
Q004	8-729-672-42	TRANSISTOR 2SC2724-C
Q021	8-729-115-15	TRANSISTOR BN1A4M
Q022	8-729-115-33	TRANSISTOR BN1F4Z
Q023	8-729-115-15	TRANSISTOR BN1A4M
Q024	8-729-115-33	TRANSISTOR BN1F4Z
Q028	8-729-115-93	TRANSISTOR BA1F4Z
Q029	8-729-115-79	TRANSISTOR BA1A4M
Q101	8-729-672-43	TRANSISTOR 2SC2724-D
Q201	8-729-115-79	TRANSISTOR BA1A4M
Q202	8-729-115-79	TRANSISTOR BA1A4M
Q301	8-729-600-27	TRANSISTOR 2SC634SP
Q302	8-729-600-27	TRANSISTOR 2SC634SP
Q303	8-729-115-79	TRANSISTOR BA1A4M
Q304	8-729-115-15	TRANSISTOR BN1A4M
Q305	8-729-115-15	TRANSISTOR BN1A4M
Q306	8-729-115-79	TRANSISTOR BA1A4M
Q307	8-729-115-79	TRANSISTOR BA1A4M
Q309	8-729-201-56	TRANSISTOR 2SK246GR2
Q310	8-729-600-27	TRANSISTOR 2SC634SP
Q311	8-729-201-56	TRANSISTOR 2SK246GR2
Q312	8-729-600-27	TRANSISTOR 2SC634SP
Q401	8-729-600-27	TRANSISTOR 2SC634SP
Q402	8-729-600-27	TRANSISTOR 2SC634SP
R001	1-249-441-11	CARBON 100K 5% 1/4W
R002	1-215-491-00	CARBON 820K 5% 1/4W
R003	1-249-401-11	CARBON 47 5% 1/4W
R004	1-249-401-11	CARBON 47 5% 1/4W
R005	1-249-441-11	CARBON 100K 5% 1/4W
R006	1-215-491-00	CARBON 820K 5% 1/4W
R007	1-249-411-11	CARBON 330 5% 1/4W
R008	1-249-405-11	CARBON 100 5% 1/4W
R009	1-249-429-11	CARBON 10K 5% 1/4W

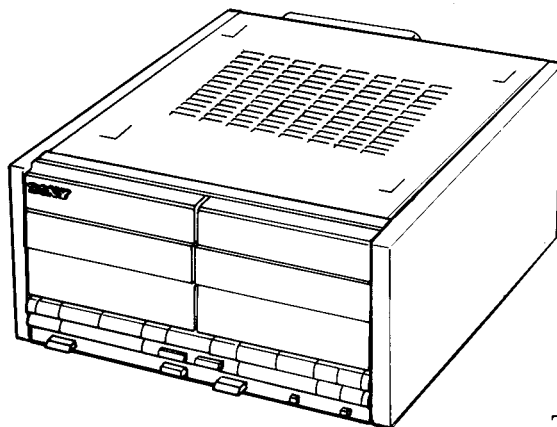
Ref.No.	Part No.	Description			
R010	1-249-429-11	CARBON	10K	5%	1/4W
R011	1-249-422-11	CARBON	2.7K	5%	1/4W
R012	1-249-431-11	CARBON	15K	5%	1/4W
R013	1-215-483-00	CARBON	390K	5%	1/4W
R014	1-249-405-11	CARBON	100	5%	1/4W
R021	1-249-429-11	CARBON	10K	5%	1/4W
R024	1-249-429-11	CARBON	10K	5%	1/4W
R025	1-249-429-11	CARBON	10K	5%	1/4W
R029	1-249-429-11	CARBON	10K	5%	1/4W
R030	1-249-429-11	CARBON	10K	5%	1/4W
R036	1-249-411-11	CARBON	330	5%	1/4W
R037	1-249-437-11	CARBON	47K	5%	1/4W
R038	1-247-903-00	CARBON	1M	5%	1/4W
R101	1-215-491-00	CARBON	820K	5%	1/4W
R102	1-249-411-11	CARBON	330	5%	1/4W
R103	1-249-434-11	CARBON	27K	5%	1/4W
R104	1-249-423-11	CARBON	3.3K	5%	1/4W
R105	1-249-426-11	CARBON	5.6K	5%	1/4W
R106	1-249-404-00	CARBON	82	5%	1/4W
R107	1-249-429-11	CARBON	10K	5%	1/4W
R108	1-249-429-11	CARBON	10K	5%	1/4W
R109	1-249-413-11	CARBON	470	5%	1/4W
R110	1-249-423-11	CARBON	3.3K	5%	1/4W
R111	1-249-420-11	CARBON	1.8K	5%	1/4W
R201	1-249-423-11	CARBON	3.3K	5%	1/4W
R202	1-249-437-11	CARBON	47K	5%	1/4W
R203	1-249-437-11	CARBON	47K	5%	1/4W
R204	1-249-417-11	CARBON	1K	5%	1/4W
R205	1-249-437-11	CARBON	47K	5%	1/4W
R206	1-249-437-11	CARBON	47K	5%	1/4W
R207	1-249-437-11	CARBON	47K	5%	1/4W
R208	1-249-437-11	CARBON	47K	5%	1/4W
R209	1-249-419-11	CARBON	1.5K	5%	1/4W
R210	1-249-419-11	CARBON	1.5K	5%	1/4W
R211	1-249-441-11	CARBON	100K	5%	1/4W
R212	1-249-441-11	CARBON	100K	5%	1/4W
R302	1-249-419-11	CARBON	1.5K	5%	1/4W
R303	1-249-435-11	CARBON	33K	5%	1/4W
R304	1-249-441-11	CARBON	100K	5%	1/4W
R305	1-249-435-11	CARBON	33K	5%	1/4W
R306	1-249-435-11	CARBON	33K	5%	1/4W
R307	1-249-423-11	CARBON	3.3K	5%	1/4W
R308	1-249-425-11	CARBON	4.7K	5%	1/4W
R309	1-249-417-11	CARBON	1K	5%	1/4W
R310	1-249-405-11	CARBON	100	5%	1/4W
R311	1-249-405-11	CARBON	100	5%	1/4W
R312	1-249-437-11	CARBON	47K	5%	1/4W
R313	1-249-414-11	CARBON	560	5%	1/4W
R314	1-249-421-11	CARBON	2.2K	5%	1/4W
R315	1-249-435-11	CARBON	33K	5%	1/4W
R316	1-249-416-11	CARBON	820	5%	1/4W
R317	1-249-410-11	CARBON	270	5%	1/4W
R318	1-249-425-11	CARBON	4.7K	5%	1/4W
R319	1-249-425-11	CARBON	4.7K	5%	1/4W

Ref.No.	Part No.	Description			
R320	1-249-437-11	CARBON	47K	5%	1/4W
R321	1-247-885-00	CARBON	180K	5%	1/4W
R322	1-249-414-11	CARBON	560	5%	1/4W
R323	1-249-416-11	CARBON	820	5%	1/4W
R324	1-249-410-11	CARBON	270	5%	1/4W
R325	1-249-421-11	CARBON	2.2K	5%	1/4W
R326	1-249-425-11	CARBON	4.7K	5%	1/4W
R327	1-249-425-11	CARBON	4.7K	5%	1/4W
R401	1-249-389-11	CARBON	4.7	5%	1/4W
R402	1-215-476-00	CARBON	200K	5%	1/4W
R403	1-249-433-11	CARBON	22K	5%	1/4W
R404	1-249-411-11	CARBON	330	5%	1/4W
R405	1-249-429-11	CARBON	10K	5%	1/4W
R406	1-249-429-11	CARBON	10K	5%	1/4W
R407	1-249-417-11	CARBON	1K	5%	1/4W
R408	1-249-417-11	CARBON	1K	5%	1/4W
R409	1-249-429-11	CARBON	10K	5%	1/4W
R411	1-249-429-11	CARBON	10K	5%	1/4W
R412	1-249-429-11	CARBON	10K	5%	1/4W
R413	1-249-429-11	CARBON	10K	5%	1/4W
R414	1-249-429-11	CARBON	10K	5%	1/4W
R415	1-249-429-11	CARBON	10K	5%	1/4W
R416	1-247-903-00	CARBON	1M	5%	1/4W
R417	1-249-423-11	CARBON	3.3K	5%	1/4W
R418	1-249-437-11	CARBON	47K	5%	1/4W
TB001	*1-537-138-21	TERMINAL BOARD (ANT)			
RT101	1-228-996-00	RES, ADJ, CARBON 47K			
S301	1-554-303-21	SWITCH, KEY BOARD			
S302	1-554-303-21	SWITCH, KEY BOARD			
S303	1-554-303-21	SWITCH, KEY BOARD			
S304	1-554-303-21	SWITCH, KEY BOARD			
S305	1-554-303-21	SWITCH, KEY BOARD			
S306	1-554-303-21	SWITCH, KEY BOARD			
S307	1-554-303-21	SWITCH, KEY BOARD			
S308	1-554-303-21	SWITCH, KEY BOARD			
S309	1-554-303-21	SWITCH, KEY BOARD			
S310	1-554-303-21	SWITCH, KEY BOARD			
S311	1-554-303-21	SWITCH, KEY BOARD			
S312	1-554-303-21	SWITCH, KEY BOARD			
S313	1-570-876-11	SWITCH, KEY BOARD			
S314	1-570-876-11	SWITCH, KEY BOARD			
S315	1-570-876-11	SWITCH, KEY BOARD			
S316	1-570-876-11	SWITCH, KEY BOARD			
S317	1-570-876-11	SWITCH, KEY BOARD			
X201	1-567-250-11	OSCILLATOR, CERAMIC			
X301	1-567-736-11	VIBRATOR, CRYSTAL			
X401	1-527-532-00	OSCILLATOR, CERAMIC			

TC-WR808M

SERVICE MANUAL

AEP Model
US Model



TC-WR808M is the STEREO CASSETTE
DECK in MHC-3000/3000CD.

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF (DIN) With TYPE IV cassette (Sony METAL-ES) 40 to 15,000 Hz (± 3 dB) With TYPE II cassette (Sony UX-S) 40 to 14,000 Hz (± 3 dB) With TYPE I cassette (Sony HF-X) 40 to 13,000 Hz (± 3 dB)
Wow and flutter	0.1% WRMS (NAB) $\pm 0.2\%$ (DIN)
Dimensions	Approx. 245 $\times$ 120 $\times$ 260 mm (w/h/d) (9 $\frac{3}{4}$ $\times$ 4 $\frac{3}{4}$ $\times$ 10 $\frac{1}{4}$ inches) incl. projecting parts and controls
Weight	Approx. 3.0 kg (6 lb 11 oz)

0dB = 0.775V

MODEL IDENTIFICATION

AEP, US model

SONY MODEL NO. TC-WR808M
STEREO CASSETTE DECK

West Germany model

SONY MODEL NO. MHC-3000
MINI HI-FI COMPONENT SYSTEM
TC-WR808M: STEREO CASSETTE DECK



STEREO CASSETTE DECK
SONY

[To apply B + voltage]

The power of this units is fed from other unit.

When the unit operates individually, connect the regulated power supply to the point as shown in the below figure.

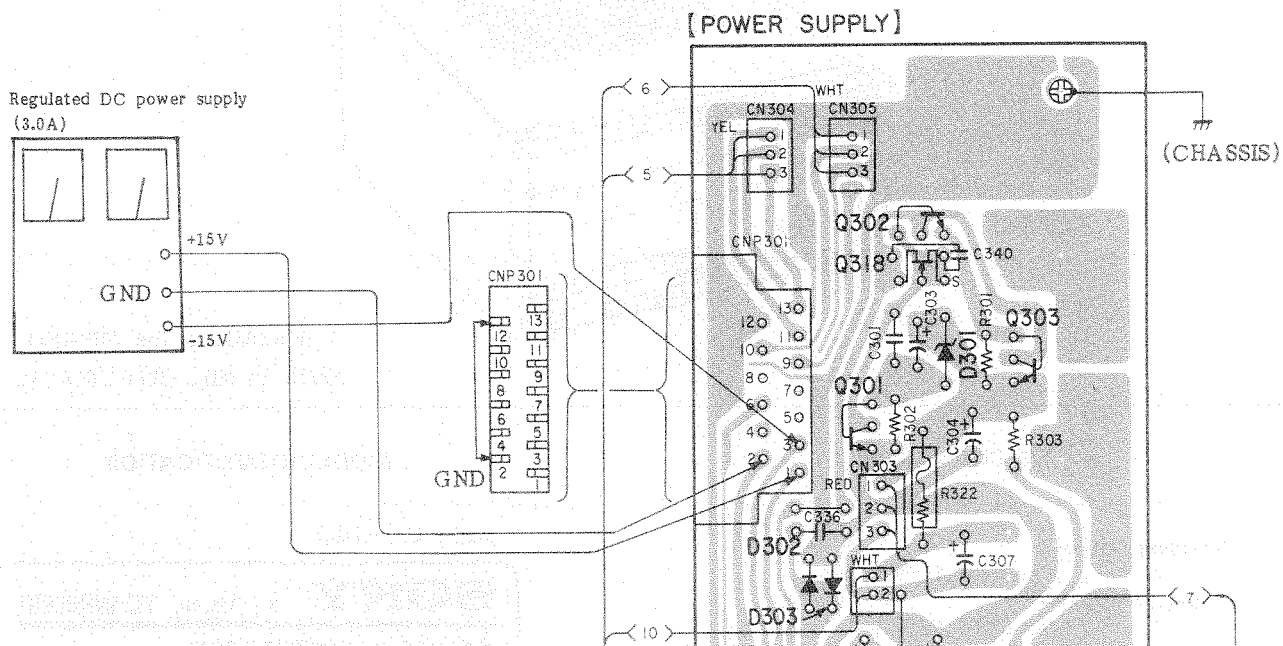
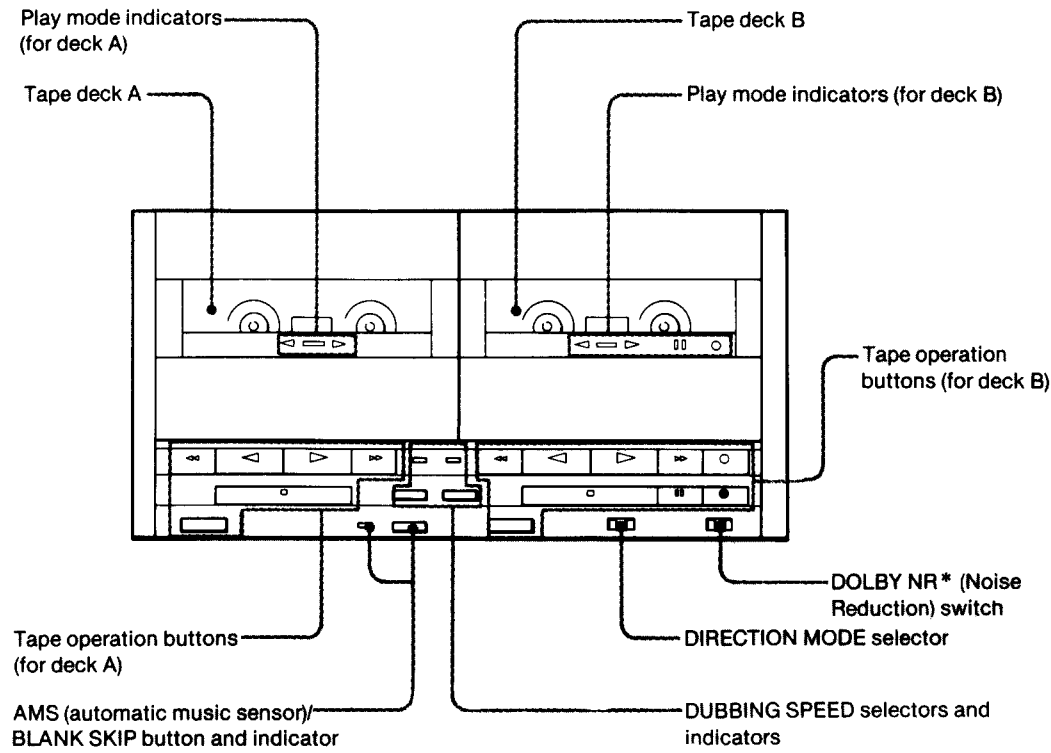


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SECTION 1
ELECTRICAL ADJUSTMENTS

PARTS IDENTIFICATION



1-1. MECHANICAL ADJUSTMENT

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
record/playback/erase head rubber belts
capstan
pinch roller
idlers
2. Demagnetize the head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

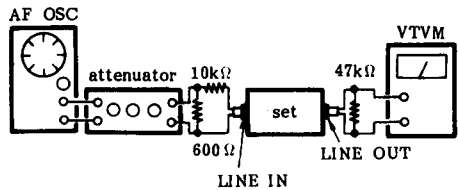
Torque	Torque meter	Meter reading
FWD	CQ-102C	30 - 60 g.cm (0.42 - 0.83oz.inch)
FWD back tension	CQ-102C	1 - 5 g.cm (0.01 - 0.07oz.inch)
FF, REW	CQ-201B	100 - 170 g.cm (1.39 - 2.36 oz.inch)

1-2. ELECTRICAL ADJUSTMENT

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.
DOLBY NR switch: OFF
ISS switch: 1
- Standard Record:
Deliver the standard input signal level to the input jack and control the attenuator to obtain the standard output signal level.

- Record Mode -



Standard Input Level

	LINE IN
source impedance	10kohms
input level	0.44V (-5dB)

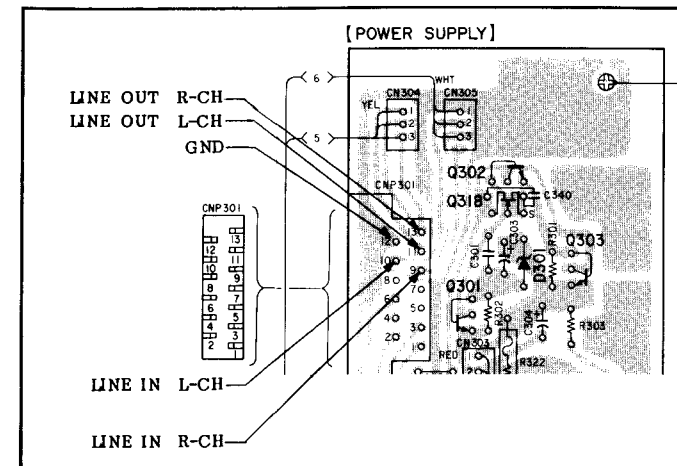
Standard Output Level

	LINE OUT
load impedance	NONE
output level	0.2V (-10dB)

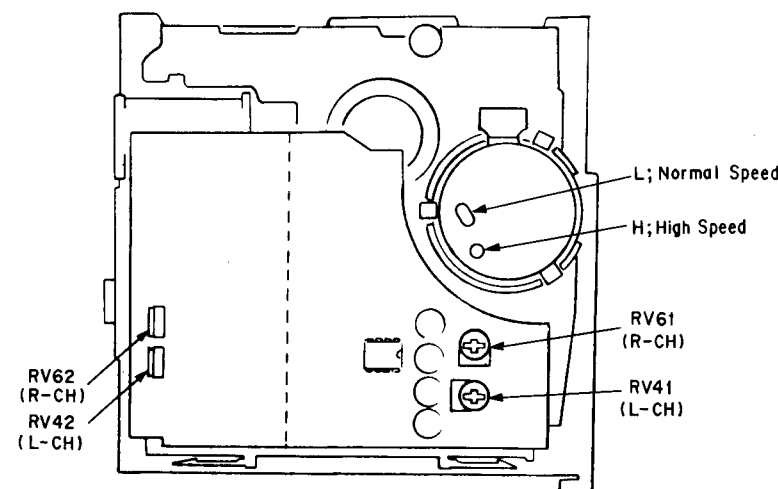
Test Tape

Type	Signal	Used for
WS-48B	3kHz, 0dB	Tape Speed Adjustment
P-4-A100	10kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0 dB	Level Adjustment

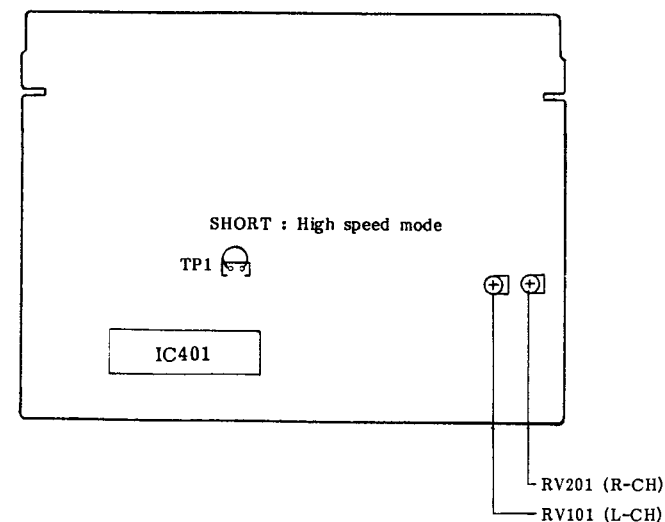
Locations of LINE IN/OUT.



Adjustment Location : DECK-A/B



Adjustment Location : Audio Board

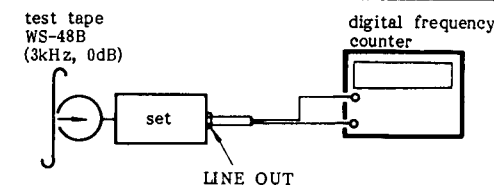


Tape Speed Adjustment DECK A DECK B

Procedure:

1. Mode: play back

Perform high speed adjustment before normal speed adjustment.



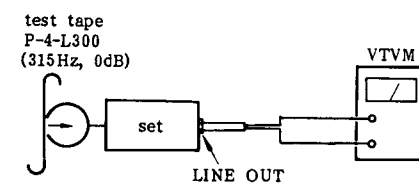
2. When the DUBBING SPEED's HIGH button is continuously pressed after the FWD button is pressed, high speed is obtained.

Specifications:

	Digital frequency counter
Normal speed	2,910 to 2,970Hz
High speed	5,910 to 5,970Hz

Playback Level Adjustment DECK A DECK B

Procedure:



Adjust { DECK A: RV41A (L-CH), RV41B (R-CH) }
{ DECK B: RV61A (L-CH), RV61B (R-CH) } so that the specifications are satisfied.

Specification:

LINE OUT level: 0.22V to 0.28V
(-11dB to -9dB)

Level difference between channels:

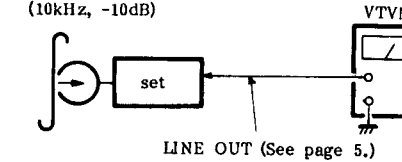
less than 1.0dB check that the check point level does not change in playback mode while changing the mode from playback to stop several times.

Record/Playback Head Azimuth Adjustment DECK A DECK B

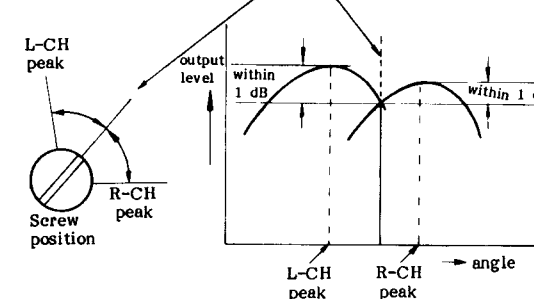
Procedure:

1. Mode: playback

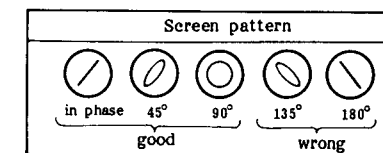
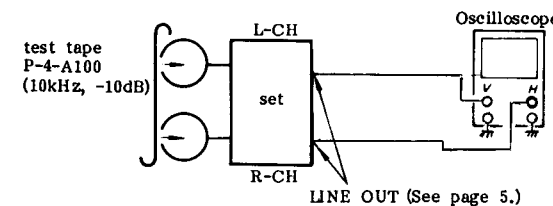
test tape
P-4-A100
(10kHz, -10dB)



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

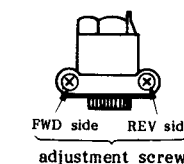


Phase Check
Mode: forward playback



3. Set in the reverse mode and repeat steps 1-2.
4. After the adjustment, lock the screws with locking compound.

Adjustment Location:

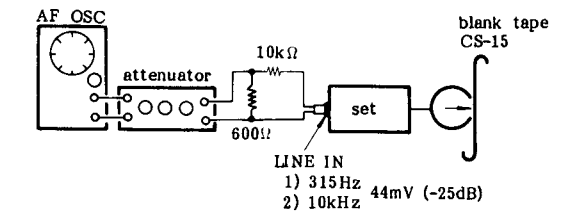


Record Bias Adjustment DECK B

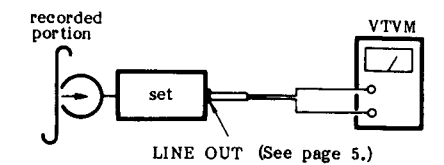
Procedure:

See page 5 for location of LINE IN.

1. Mode: record



2. Mode: playback



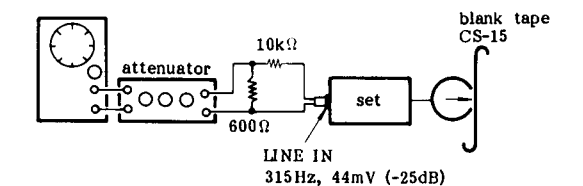
Confirm that the 10kHz playback output is -0.5dB to 0.5dB relative to the 315 Hz output. If necessary, adjust RV42 (L-CH), RV62 (R-CH) and repeat the steps given above.

Record Level Adjustment DECK B

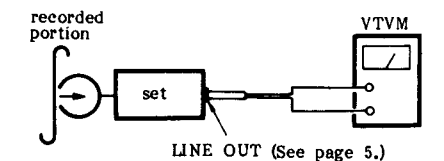
Procedure:

See page 5 for location of LINE IN.

1. Mode: record



2. Mode: playback



3. Playback the signal recorded in step 1. Confirm that the signal level is within the specification below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat steps 1 to 3.

Specification:

LINE OUT point (see page 5) level: 0.73V to 0.82V (-0.5dB to 0.5dB)

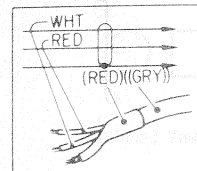
SECTION 2 DIAGRAMS

2-1. PRINTED WIRING BOARDS

See page 15 for Semiconductor Lead Layouts.

Note:

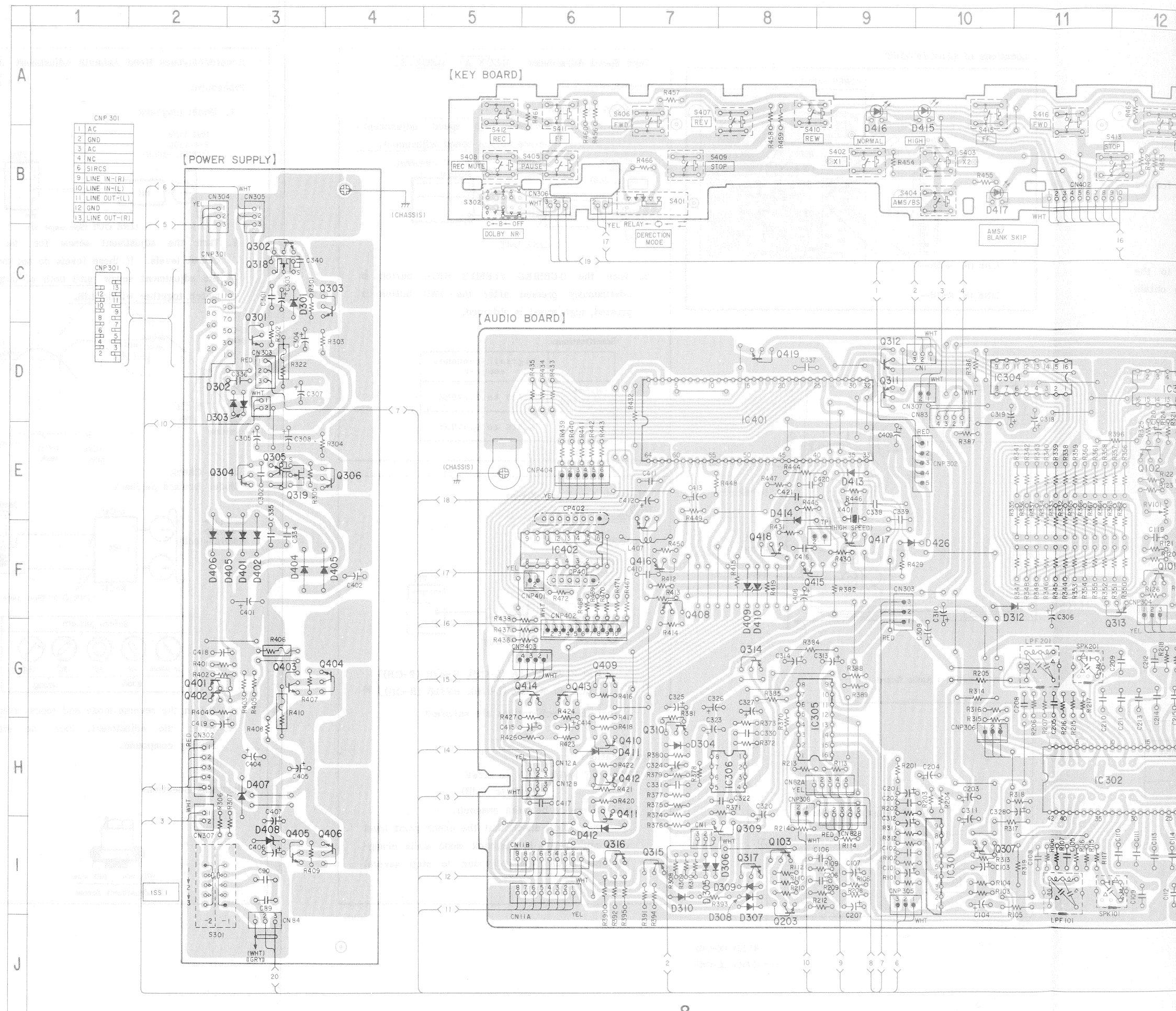
- Color code or sleeving over the end of the jacket.

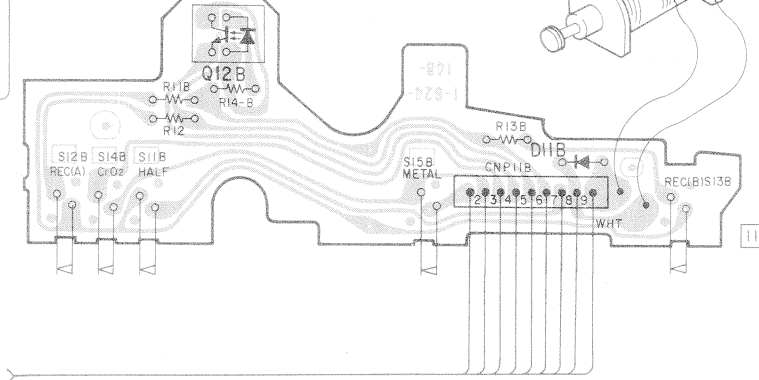
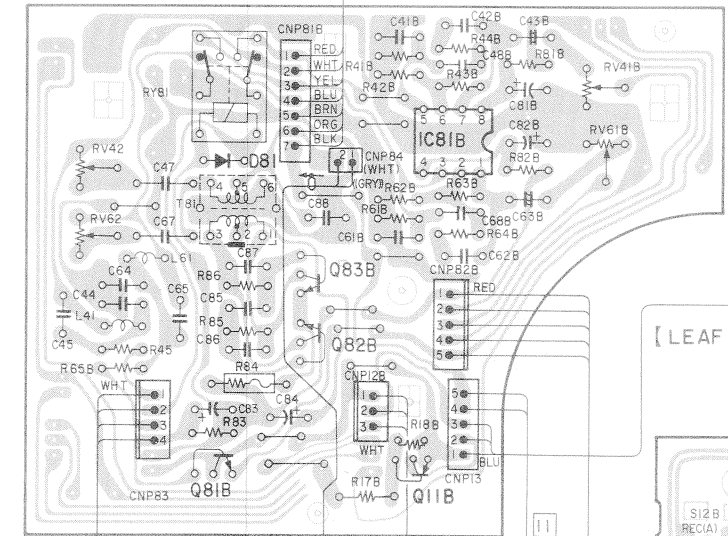
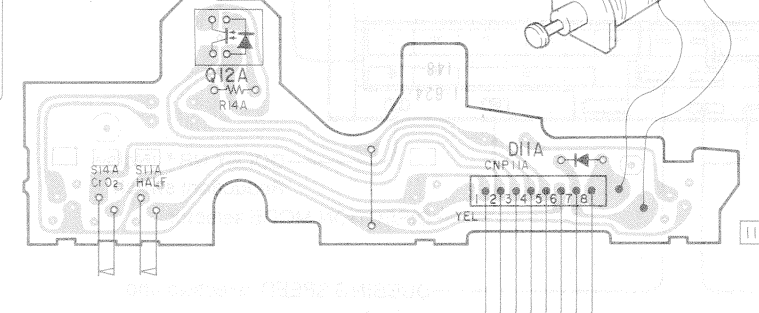
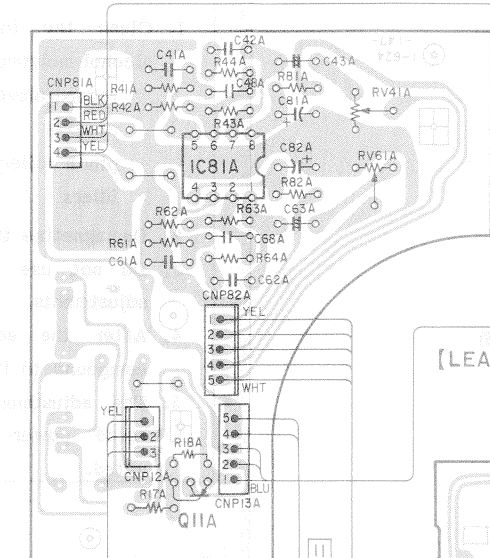
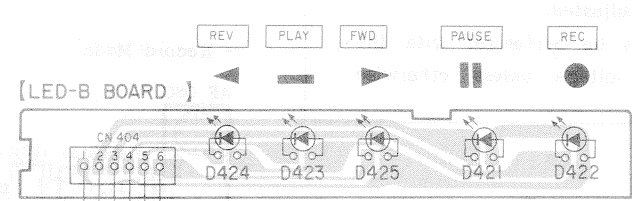
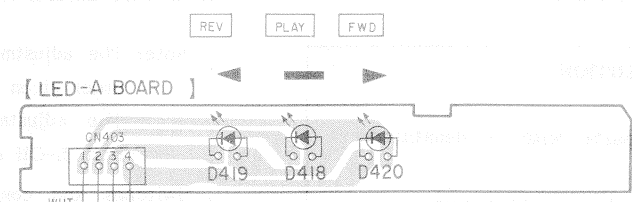
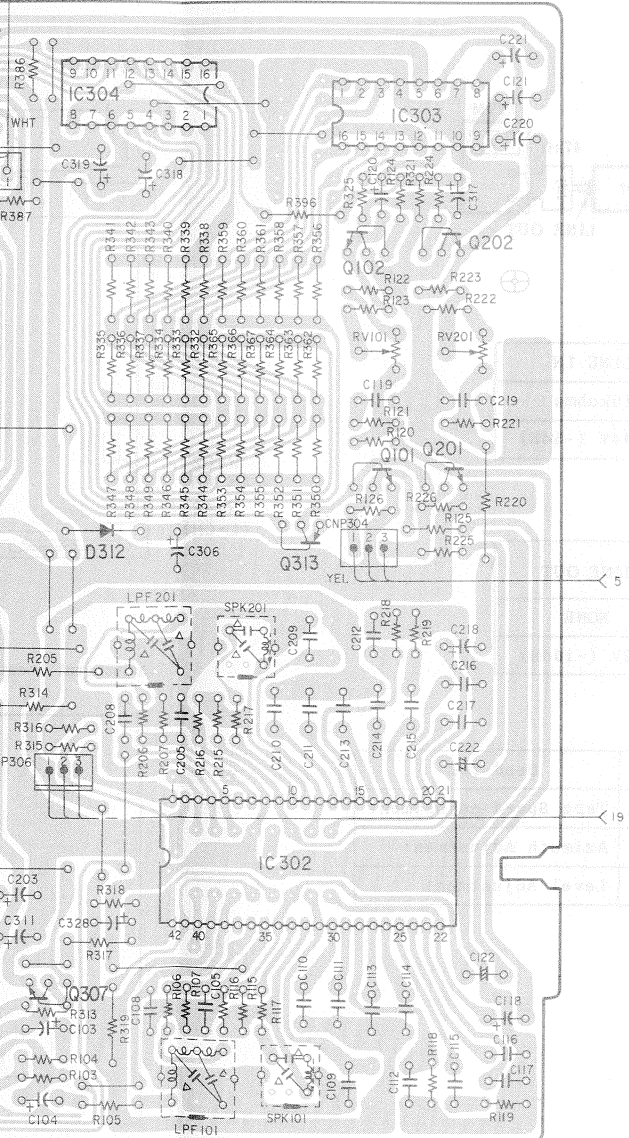
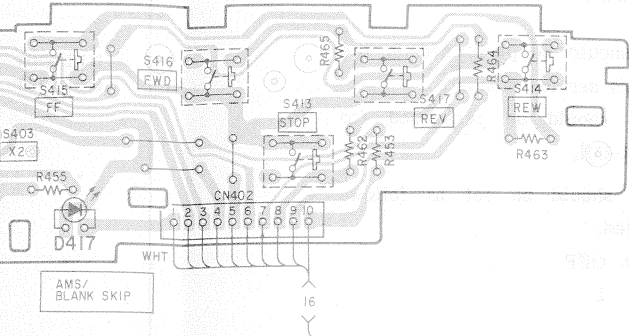


- Indicates side identified with part number.

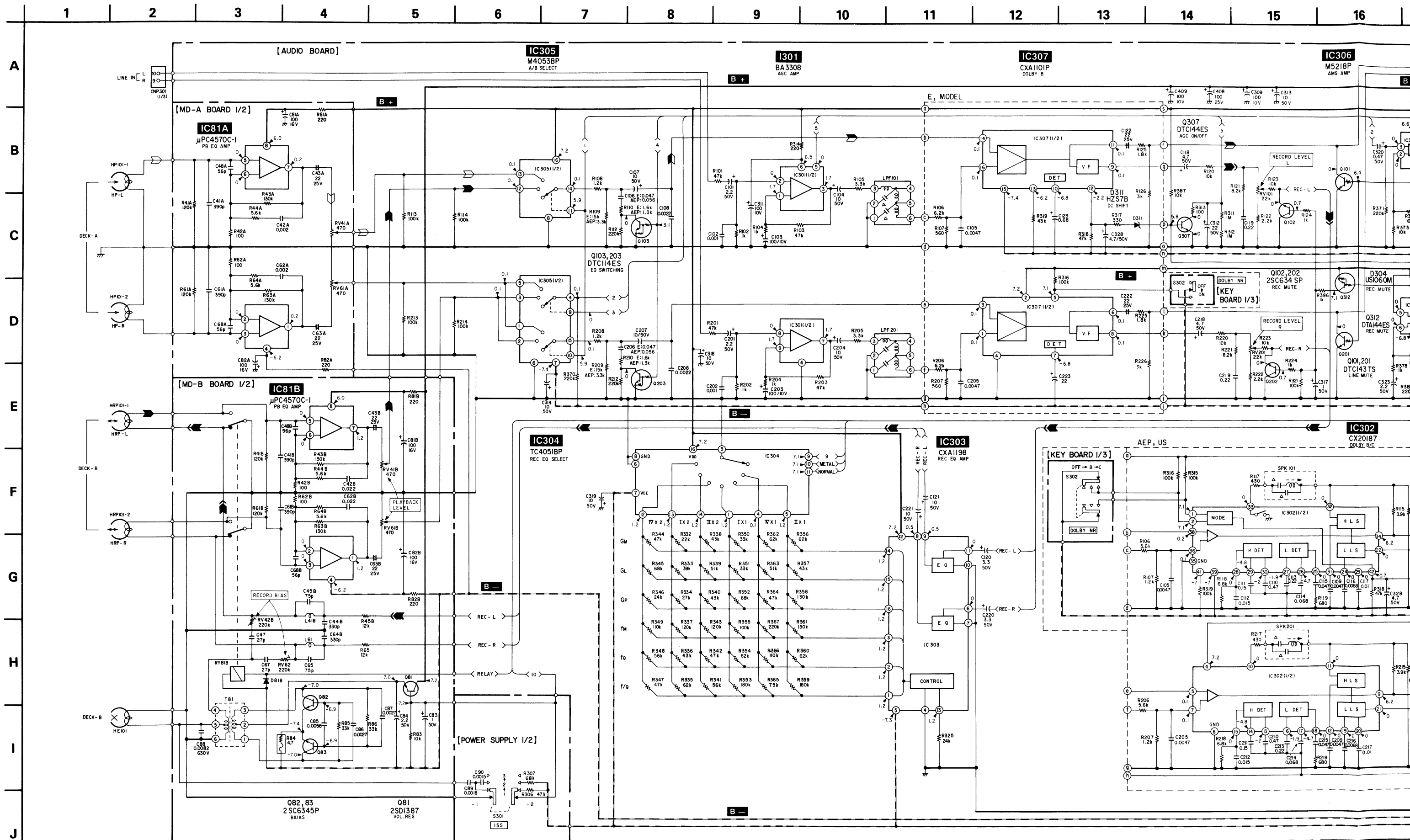
Semiconductor Location

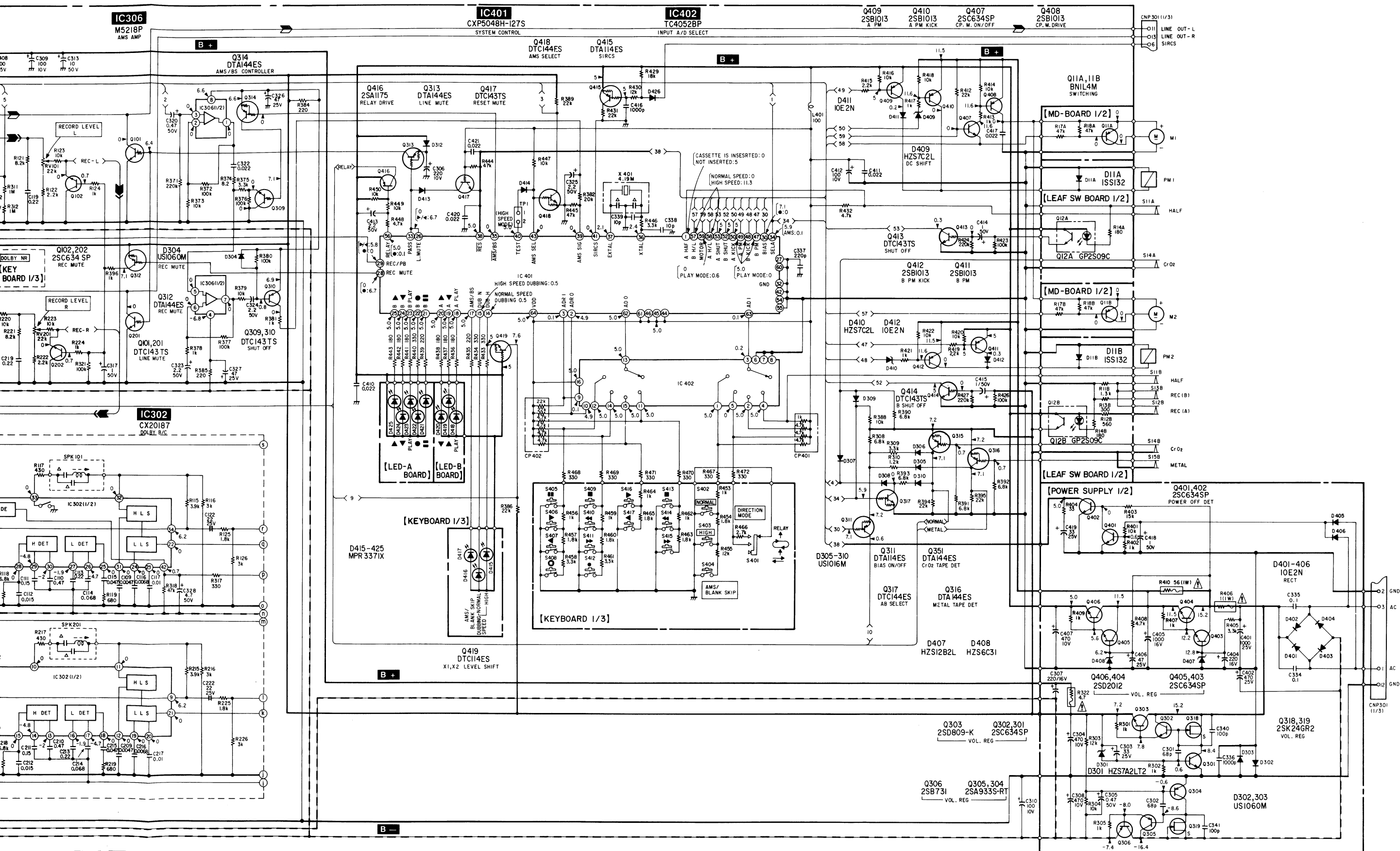
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
IC81-A	B-18	Q314	G-8	D308	I-7
IC81-B	G-19	Q315	I-7	D310	I-7
IC301	I-9	Q316	I-6	D312	F-10
IC302	H-11	Q317	I-8	D401	F-2
IC303	D-12	Q318	C-3	D402	F-2
IC304	D-10	Q319	E-3	D403	F-3
IC305	H-8	Q401	G-2	D404	F-3
IC306	H-7	Q402	G-2	D405	F-2
IC401	D-8	Q403	G-3	D406	F-2
IC402	F-6	Q404	G-3	D407	H-2
Q11-A	D-18	Q405	I-3	D408	I-3
Q11-B	I-19	Q406	I-3	D409	F-7
Q12-A	D-20	Q407	F-6	D410	F-8
Q12-B	H-22	Q408	F-7	D411	H-6
Q81-B	I-18	Q409	G-6	D412	H-6
Q82-B	H-19	Q410	H-6	D413	E-9
Q83-B	H-19	Q411	H-6	D414	E-8
Q101	F-12	Q412	H-6	D415	A-9
Q102	E-12	Q413	G-6	D416	A-9
Q103	I-8	Q414	G-5	D417	B-10
Q201	F-12	Q415	F-8	D418	B-15
Q202	I-8	Q416	F-7	D419	B-14
Q203	C-2	Q417	F-9	D420	B-15
Q301	C-3	Q418	F-8	D421	D-16
Q302	C-3	Q419	D-8	D422	D-16
Q303	C-3	D11-A	D-22	D423	D-15
Q304	E-2	D11-B	I-24	D424	D-14
Q305	E-3	D81-B	G-18	D425	D-15
Q306	E-3	D301	C-3	D426	F-9
Q307	I-10	D302	D-2		
Q309	H-7	D303	D-2		
Q310	G-7	D304	H-7		
Q311	D-9	D305	I-7		
Q312	D-9	D306	I-7		
Q313	F-11	D307	I-7		





2-2. SCHEMATIC DIAGRAM . See page 15 for note.





SECTION 3

EXPLODED VIEWS

Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- $\triangle$: internal component.
-  : fusible resistor.
-  : B+ Line
-  : B- Line
-  : adjustment for repair.
- Total current is measured with no cassette installed.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark : STOP
-  : FWD  : REV  : REC
- Voltages are taken with a VOM (50 $\text{k}\Omega/\text{V}$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 -  : PB (DECK A)
 -  : PB (DECK B)
 -  : REC (DECK B)
 -  : PB

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

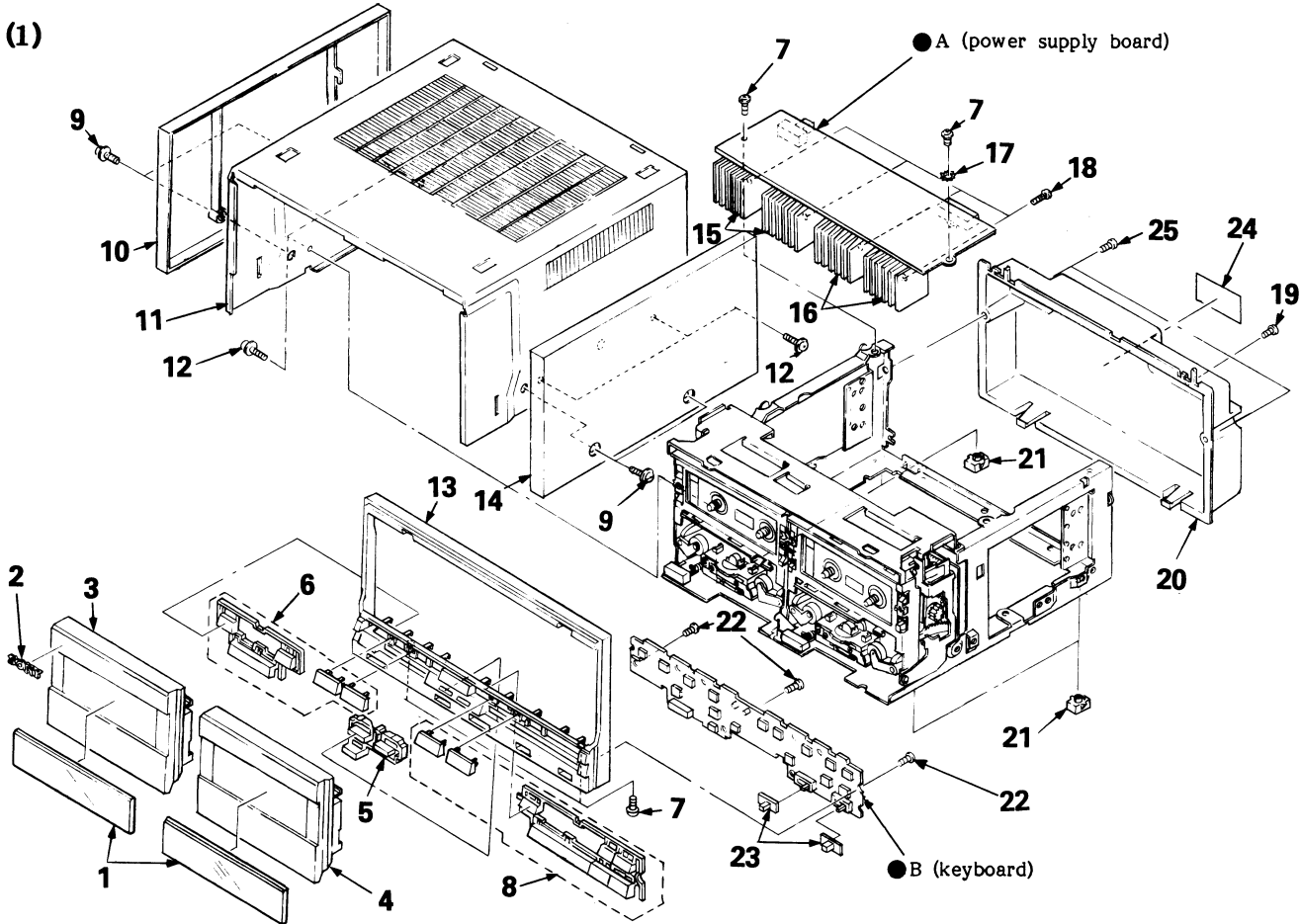
. SWITCH

Ref. No.	Switch	Position
S11A	HALF	OFF
S11B	HALF	OFF
S12	REC (A)	OFF
S13	REC (B)	OFF
S14A	CrO_2	OFF
S14B	CrO_2	OFF
S15	METAL	OFF
S301	ISS	1
S302	DOLBY NR	OFF
S401	DIRECTION MODE	
S402 to 417	KEY MATRIX	

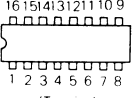
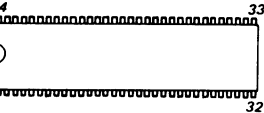
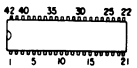
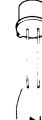
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts' Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

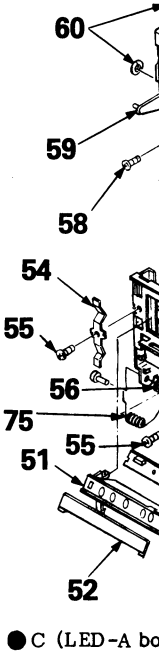


. Semiconductor Lead Layouts

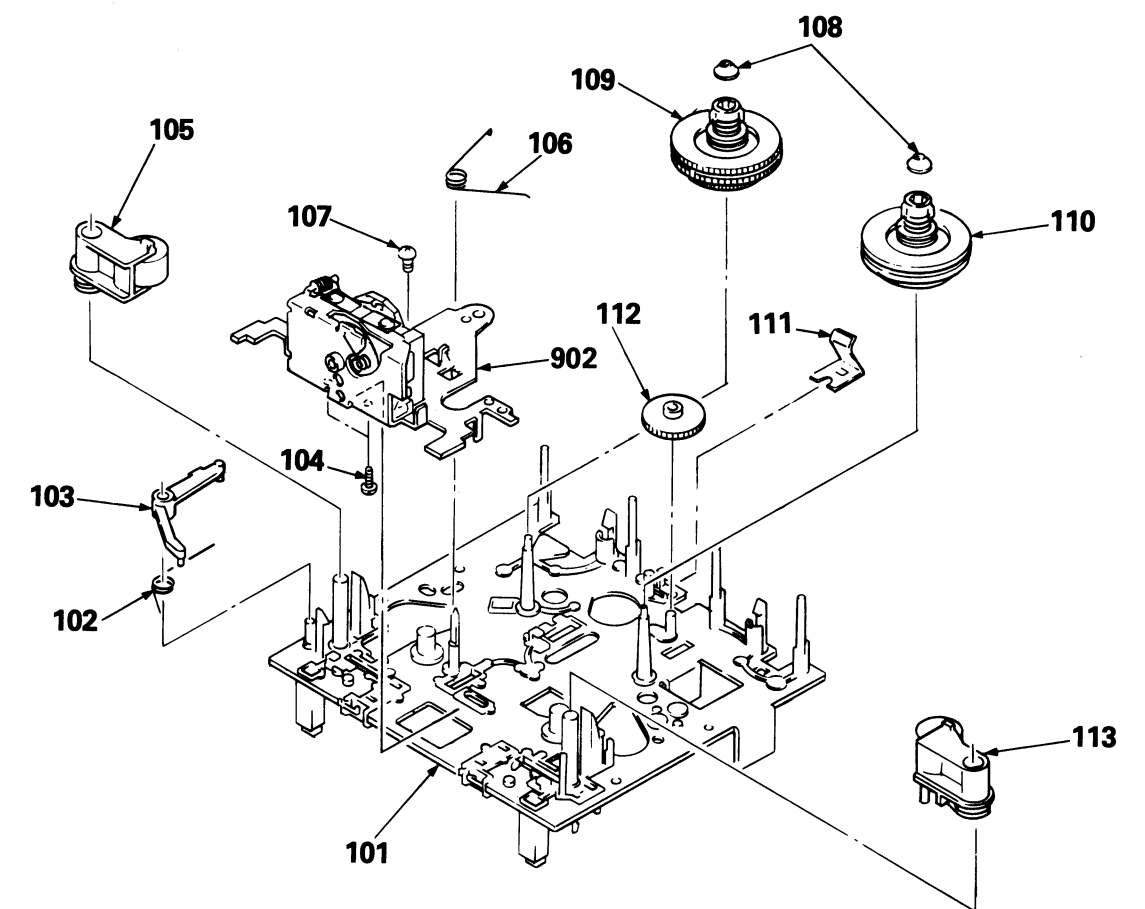
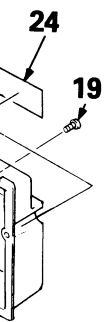
DTA114ES DTA144ES DTC114ES DTC143TS DTC144ES 2SC634SP 	2SB1013 2SC2001 2SD1387 	CXA1198P TC4051BP TC4052BP M4053BP 	HZS6C3L HZS7A1L HZS7C2L HZS12B2L US1060M 10E2N ISS132 
2SA1175 	2SD2012 	CXP5048H-127S 	GP2S09-B 
2SB731 2SD809-K 	2SK246GR2 	CX20187 	MAY387TS MPG3371X MPG387TS MPR3371X MPR387TS 
BA3308 	M5218P $\mu\text{PC4570C-1}$ 		

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks	No.	Part No.
1	3-340-129-01	WINDOW		13	X-3332-467-1	(AEP, US)...PANEL ASSY, FRONT		51	*3-340-144
2	4-920-869-01	EMBLEM, SONY			X-3332-469-1	(E).....PANEL ASSY, FRONT		52	3-340-127
3	3-340-148-01	(AEP, US)...LID (A), CASSETTE		14	3-346-340-01	(TC-WR808M)...PLATE (C-RIGHT), SIDE		53	3-340-127
	3-340-148-11	(E).....LID (A), CASSETTE		15	*4-921-402-31	HEAT SINK		54	3-340-137
4	3-340-149-01	(AEP, US)...LID (B), CASSETTE		16	*4-921-402-21	HEAT SINK		55	7-685-850
	3-340-149-11	(E).....LID (B), CASSETTE		17	7-623-422-07	LW 3, TYPE B		56	7-624-105
5	3-340-145-01	BUTTON (C)		18	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3		57	*3-340-150
6	3-340-146-01	(AEP, US)...BUTTON (A)		19	7-685-147-11	SCREW +P 3X10 TYPE2 NON-SLIT		58	7-685-861
	3-340-146-11	(E).....BUTTON (A)		20	*3-340-112-01	PLATE, JACK		59	*X-3332-46
7	7-682-147-01	SCREW +BVTP 3X6 (S)		21	X-4902-937-1	FOOT ASSY, RUBBER		60	3-558-708
8	3-340-147-01	(AEP, US)...BUTTON (B)		22	7-685-133-11	SCREW +BTP 2.6X6 TYPE2 N-S		61	*3-340-142
	3-340-147-11	(E).....BUTTON (B)		23	3-323-415-41	(AEP, US)...KNOB, SWITCH TIMER		62	*X-3332-46
					3-323-415-51	(E).....KNOB, SWITCH TIMER		63	3-340-123
9	4-886-821-51	(TC-WR808M)...SCREW, CASE, (M3X14)		24	*3-346-326-01	(AEP, US)...LABEL MODEL NUMBER			
10	4-346-341-01	(TC-WR808M)...PLATE (C-LEFT), SIDE			*3-346-327-01	(WEST GERMANY)...LABEL MODEL NUMBER			
11	4-920-818-12	CASE			*3-346-328-01	(E).....LEBEL MODEL NUMBER			
12	3-704-366-01	(TC-WR808)...SCREW (CASE) (M3X8)		25	7-685-752-01	+PTT 3X8			

(2)

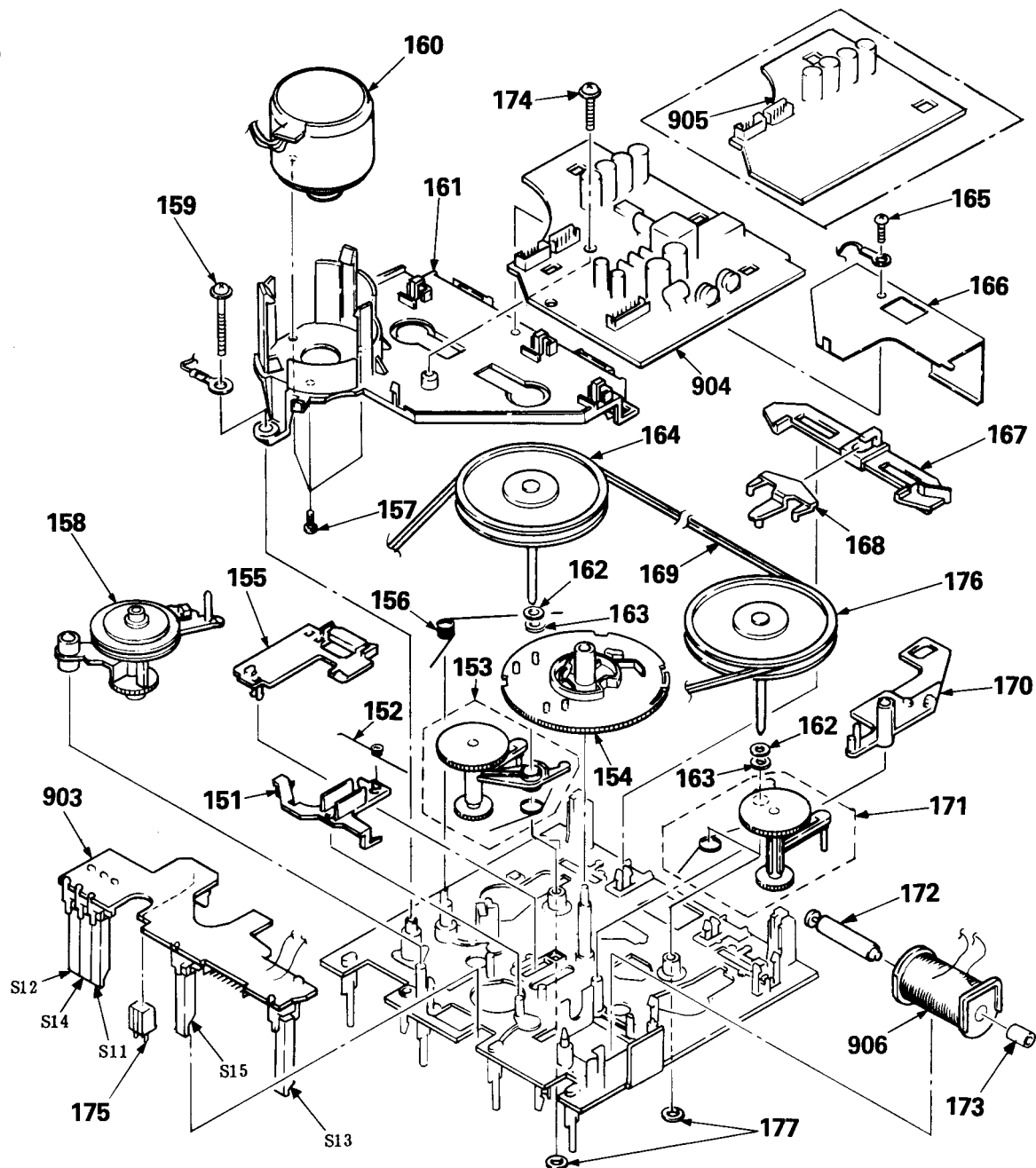


(3)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	*X-3343-418-1	CHASSIS ASSY, MECHANICAL		109	X-3343-415-1	TABEL (REV) ASSY, REEL	
102	3-343-477-01	SPRING, TORSION (EJECT SAFETY)		110	X-3343-401-1	TABEL ASSY, REEL	
103	*3-343-476-01	LEVER (EJECT SAFETY LEVER)		111	3-343-420-01	SPRING, LEAF	
104	7-685-102-19	SCREW +P 2X4 NOW-SLIT TYPE 2		112	3-343-411-01	GEAR (FF GEAR)	
105	X-3343-403-1	LEVER (PINCH LEVER REV) ASSY		113	X-3343-402-1	LEVER (PINCH LEVER FWD) ASSY	
106	3-343-401-01	SPRING, TORSION		902	A-2108-122-A	(DECK-A)...PC BOARD ASSY, HEAD (HP101)	
107	7-621-773-86	SCREW +BVT 2.6X4 (S)			A-2108-123-A	(DECK-B)...PC BOARD ASSY, HEAD (HRP101/HE101)	
108	3-343-439-01	CAP (REEL TABLE)					

(4)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	3-343-453-01	SLIDER (BRAKE PLATE)		167	*3-343-457-01	SLIDER (REVERSE SLIDER)	
152	3-343-429-01	SPRING, TORSION		168	3-343-462-01	LEVER	
153	X-3343-406-1	LEVER (TU ARM REV) ASSY		169	3-343-426-01	BELT (CAPSTAN BELT SQUARE)	
154	3-343-470-01	GEAR (CAM GEAR)		170	*3-343-456-01	LEVER (PM LEVER)	
155	*3-343-461-01	SLIDER		171	X-3343-405-1	LEVER (TU ARM FWD) ASSY	
156	3-343-430-01	SPRING, TORSION		172	*3-343-425-01	ARBOR(MOVABLE IRON ARBOR),IRON	
157	7-627-556-28	SCREW +P 2.6X3.5		173	*3-343-424-01	ARBOR (FIXED IRON ARBOR), IRON	
158	X-3343-414-1	LAYER (FR ARM) ASSY		174	3-343-404-01	SCREW (PTPMH 2X10)	
159	3-343-403-01	SCREW (PTTWH 2X18)		175	*3-343-419-01	HOLDER (S SENSER A)	
160	X-3343-408-1	MOTOR ASSY		176	X-3343-416-1	FLYWHEEL (REV) COMPLETE ASSY	
161	*X-3343-407-1	BASE (THRUST RETAINER) ASSY		177	3-343-473-01	WASHER, NYLON	
162	4-605-835-11	WASHER (2.6), POLYSLIDER		903	*1-624-148-13	(DECK-B)...PC BOARD, LEAF SW	
163	3-307-482-00	WASHER, LUMILER		904	*1-624-146-11	(DECK-B)...PC BOARD, MD-B	
164	X-3343-411-1	FLYWHEEL COMPLETE ASSY		905	*1-624-147-13	(DECK-A)...PC BOARD, MD-A	
165	7-685-102-19	SCREW +P 2X4 NON-SLIT TYPE 2		906	1-454-456-11	SOLENOID, PLUNGER (PM1,2)	
166	*3-343-480-01	PLATE, SHIELD					

SECTION 4

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA....: μ A...., UPA....: μ PA....,UPC....: μ PC, UPD....: μ PD...

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				
901	*A-2056-384-A	(AEP, US)...MOUNTED PCB, AUDIO				
	*A-2056-385-A	(E).....MOUNTED PCB, AUDIO				
902	A-2108-122-A	(DECK-A)...PC BOARD ASSY, HEAD (HP101)				
	A-2108-123-A	(DECK-B)...PC BOARD ASSY, HEAD (HRP101/HE101)				
903	*1-624-148-13	(DECK-B)...PC BOARD, LEAF SW				
904	*1-624-146-11	(DECK-B)...PC BOARD, MD-B				
905	*1-624-147-13	(DECK-A)...PC BOARD, MD-A				
906	1-454-456-11	SOLENOID, PLUNGER (PM1,2)				
C41A	1-162-289-31	CERAMIC	390PF	10%	50V	
C41B	1-162-289-31	CERAMIC	390PF	10%	50V	
C42A	1-136-157-00	FILM	0.022MF	5%	50V	
C42B	1-136-157-00	FILM	0.022MF	5%	50V	
C43A	1-124-282-00	ELECT	22MF	20%	25V	
C43B	1-124-282-00	ELECT	22MF	20%	25V	
C44	1-162-288-31	CERAMIC	330PF	10%	50V	
C45	1-136-273-91	FILM	75PF	5%	630V	
C47	1-162-209-31	CERAMIC	27PF	5%	50V	
C48A	1-162-217-31	CERAMIC	56PF	5%	50V	
C48B	1-162-217-31	CERAMIC	56PF	5%	50V	
C61A	1-162-289-31	CERAMIC	390PF	10%	50V	
C61B	1-162-289-31	CERAMIC	390PF	10%	50V	
C62A	1-136-157-00	FILM	0.022MF	5%	50V	
C62B	1-136-157-00	FILM	0.022MF	5%	50V	
C63A	1-124-282-00	ELECT	22MF	20%	25V	
C63B	1-124-282-00	ELECT	22MF	20%	25V	
C64	1-162-288-31	CERAMIC	330PF	10%	50V	
C65	1-136-273-91	FILM	75PF	5%	630V	
C67	1-162-209-31	CERAMIC	27PF	5%	50V	
C68A	1-162-217-31	CERAMIC	56PF	5%	50V	
C68B	1-162-217-31	CERAMIC	56PF	5%	50V	
C81A	1-124-445-00	ELECT	100MF	20%	16V	
C81B	1-126-101-11	ELECT	100MF	20%	16V	
C82A	1-124-445-00	ELECT	100MF	20%	16V	
C82B	1-126-101-11	ELECT	100MF	20%	16V	
C83	1-124-499-11	ELECT	1MF	20%	50V	
C84	1-124-925-11	ELECT	2.2MF	20%	50V	
C85	1-130-480-00	MYLAR	0.0056MF	5%	50V	
C86	1-130-476-00	MYLAR	0.0027MF	5%	50V	
C87	1-130-476-00	MYLAR	0.0027MF	5%	50V	
C88	1-136-562-11	FILM	0.0082MF	5%	630V	
C89	1-136-554-91	FILM	0.0018MF	5%	630V	
C90	1-136-553-91	FILM	0.0015MF	5%	630V	
C101	1-124-925-11	ELECT	2.2MF	20%	50V	
C102	1-162-294-31	CERAMIC	0.001MF	10%	50V	
C103	1-124-443-00	ELECT	100MF	20%	10V	
C104	1-123-875-11	ELECT	10MF	20%	50V	
C105	1-161-375-00	(AEP, US)...CERAMIC	0.0022MF	20%	16V	
C105	1-161-377-00	(E).....CERAMIC	0.0047MF	20%	16V	
C106	1-136-161-00	(E).....FILM	0.047MF	5%	50V	
C106	1-136-162-00	(AEP, US)...FILM	0.056MF	5%	50V	
C107	1-123-875-11	ELECT	10MF	20%	50V	
C108	1-161-375-00	CERAMIC	0.0022MF	20%	16V	
C109	1-130-479-00	(AEP, US)...MYLAR	0.0047MF	5%	50V	
C110	1-136-173-00	(AEP, US)...FILM	0.47MF	5%	50V	
C111	1-136-167-00	(AEP, US)...FILM	0.15MF	5%	50V	
C112	1-136-155-00	(AEP, US)...FILM	0.015MF	5%	50V	
C113	1-136-169-00	(AEP, US)...FILM	0.22MF	5%	50V	
C114	1-136-163-00	(AEP, US)...FILM	0.068MF	5%	50V	
C115	1-136-161-00	(AEP, US)...FILM	0.047MF	5%	50V	
C116	1-130-481-00	(AEP, US)...MYLAR	0.0068MF	5%	50V	
C117	1-136-153-00	(AEP, US)...FILM	0.01MF	5%	50V	
C118	1-124-927-11	ELECT	4.7MF	20%	50V	
C119	1-136-169-00	FILM	0.22MF	5%	50V	
C120	1-123-382-00	ELECT	3.3MF	20%	50V	
C121	1-123-875-11	ELECT	10MF	20%	50V	
C122	1-124-282-00	ELECT	22MF	20%	25V	
C123	1-131-346-00	(E)....ELECT	22MF	20%	50V	
C201	1-124-925-11	ELECT	2.2MF	20%	50V	
C202	1-162-294-31	CERAMIC	0.001MF	10%	50V	
C203	1-124-443-00	ELECT	100MF	20%	10V	
C204	1-123-875-11	ELECT	10MF	20%	50V	
C205	1-161-375-00	(AEP, US)...CERAMIC	0.0022MF	20%	16V	
C205	1-161-377-00	(E).....CERAMIC	0.0047MF	20%	16V	
C206	1-136-161-00	(E).....FILM	0.047MF	20%	50V	
C206	1-136-162-00	(AEP, US)...FILM	0.056MF	5%	50V	
C207	1-123-875-11	ELECT	10MF	20%	50V	
C208	1-161-375-00	CERAMIC	0.0022MF	20%	16V	
C209	1-130-479-00	(AEP, US)...MYLAR	0.0047MF	5%	50V	
C210	1-136-173-00	(AEP, US)...FILM	0.47MF	5%	50V	
C211	1-136-167-00	(AEP, US)...FILM	0.15MF	5%	50V	
C212	1-136-155-00	(AEP, US)...FILM	0.015MF	5%	50V	
C213	1-136-169-00	(AEP, US)...FILM	0.22MF	5%	50V	
C214	1-136-163-00	(AEP, US)...FILM	0.068MF	5%	50V	
C215	1-136-161-00	(AEP, US)...FILM	0.047MF	5%	50V	
C216	1-130-481-00	(AEP, US)...MYLAR	0.0068MF	5%	50V	
C217	1-136-153-00	(AEP, US)...FILM	0.01MF	5%	50V	
C218	1-124-927-11	ELECT	4.7MF	20%	50V	

Ref.No.	Part No.	Description			
C219	1-136-169-00	FILM	0.22MF	5%	50V
C220	1-123-382-00	ELECT	3.3MF	20%	50V
C221	1-123-875-11	ELECT	10MF	20%	50V
C222	1-124-282-00	ELECT	22MF	20%	25V
C223	1-131-346-00	(E).....ELECT	22MF	20%	50V
C301	1-162-219-31	CERAMIC	68PF	5%	50V
C302	1-162-219-31	CERAMIC	68PF	5%	50V
C303	1-124-482-11	ELECT	33MF	20%	25V
C304	1-124-472-11	ELECT	470MF	20%	10V
C305	1-124-902-00	ELECT	0.47MF	20%	50V
C306	1-124-444-00	ELECT	220MF	20%	10V
C307	1-124-120-11	ELECT	220MF	20%	16V
C308	1-124-472-11	ELECT	470MF	20%	10V
C309	1-124-443-00	ELECT	100MF	20%	10V
C310	1-124-443-00	ELECT	100MF	20%	10V
C311	1-124-443-00	ELECT	100MF	20%	10V
C312	1-124-908-11	ELECT	22MF	20%	50V
C313	1-123-875-11	ELECT	10MF	20%	50V
C314	1-123-875-11	ELECT	10MF	20%	50V
C317	1-124-499-11	ELECT	1MF	20%	50V
C318	1-123-875-11	ELECT	10MF	20%	50V
C319	1-123-875-11	ELECT	10MF	20%	50V
C320	1-124-902-00	ELECT	0.47MF	20%	50V
C322	1-136-157-00	FILM	0.022MF	5%	50V
C323	1-124-925-11	ELECT	2.2MF	20%	50V
C324	1-124-925-11	ELECT	2.2MF	20%	50V
C325	1-124-925-11	ELECT	2.2MF	20%	50V
C326	1-124-477-11	ELECT	47MF	20%	25V
C327	1-124-477-11	ELECT	47MF	20%	25V
C328	1-124-927-11	ELECT	4.7MF	20%	50V
C334	1-136-165-91	FILM	0.1MF		
C335	1-136-165-91	FILM	0.1MF		
C336	1-162-294-11	CERAMIC	1000PF		
C337	1-162-286-11	CERAMIC	220PF		
C338	1-162-199-31	CERAMIC	10PF		
C339	1-162-199-31	CERAMIC	10PF		
C340	1-162-282-31	CERAMIC	100PF		
C341	1-162-282-31	CERAMIC	100PF		
C401	1-123-337-51	ELECT	1000MF	20%	25V
C402	1-124-480-11	ELECT	470MF	20%	25V
C404	1-124-120-11	ELECT	220MF	20%	16V
C405	1-124-360-00	ELECT	1000MF	20%	16V
C406	1-124-477-11	ELECT	47MF	20%	25V
C407	1-124-472-11	ELECT	470MF	20%	10V
C408	1-124-478-11	ELECT	100MF	20%	25V
C409	1-124-443-00	ELECT	100MF	20%	10V
C410	1-161-494-00	CERAMIC	0.022MF		25V
C411	1-161-494-00	CERAMIC	0.022MF		25V
C412	1-124-443-00	ELECT	100MF	20%	10V
C413	1-124-925-11	ELECT	2.2MF	20%	50V
C414	1-124-499-11	ELECT	1MF	20%	50V
C415	1-124-499-11	ELECT	1MF	20%	50V
C416	1-162-294-31	CERAMIC	0.001MF	10%	50V
C417	1-161-494-00	CERAMIC	0.022MF		25V
C418	1-124-499-11	ELECT	1MF	20%	50V
C419	1-124-482-11	ELECT	33MF	20%	25V
C420	1-161-494-00	CERAMIC	0.022MF		25V
C421	1-161-494-00	CERAMIC	0.022MF		25V

Ref.No.	Part No.	Description
CNP11A*1-506-501-11		PIN, CONNECTOR 8P
CNP11B*1-506-615-11		PIN, CONNECTOR 9P
CNP12A*1-564-337-51		PIN, CONNECTOR 3P
CNP12B*1-564-337-51		PIN, CONNECTOR 3P
CNP13A*1-564-707-11		PIN, CONNECTOR (SMALL TYPE) 5P
CNP13B*1-564-707-11		PIN, CONNECTOR (SMALL TYPE) 5P
CNP81A*1-564-338-51		PIN, CONNECTOR 4P
CNP81B*1-564-709-11		PIN, CONNECTOR (SMALL TYPE) 7P
CNP82A*1-564-339-51		PIN, CONNECTOR 5P
CNP82B*1-564-339-51		PIN, CONNECTOR 5P
CNP83 *1-564-338-51		PIN, CONNECTOR 4P
CNP84 *1-564-704-11		PIN, CONNECTOR (SMALL TYPE) 2P
CNP301*1-565-291-11		SOCKET, CONNECTOR 13P
CNP306*1-564-336-61		(E).....PIN, CONNECTOR 2P
CNP306*1-564-337-61		(AEP, US)...PIN, CONNECTOR 3P
CNP401*1-564-336-51		PIN, CONNECTOR 2P
CNP402*1-564-666-11		PIN, CONNECTOR 10P
CNP403*1-564-338-51		PIN, CONNECTOR 4P
CNP404*1-564-340-51		PIN, CONNECTOR 6P
CP401	1-233-119-11	COMPOSITION CIRCUIT BLOCK
CP402	1-233-120-11	COMPOSITION CIRCUIT BLOCK
D11A	8-719-940-76	DIODE 1SS132
D11B	8-719-940-76	DIODE 1SS132
D81	8-719-940-76	DIODE 1SS132
D301	8-719-933-43	DIODE HZS7A2LT2
D302	8-719-000-26	DIODE US1060M
D303	8-719-000-26	DIODE US1060M
D304	8-719-000-26	DIODE US1060M
D305	8-719-000-26	DIODE US1060M
D306	8-719-000-26	DIODE US1060M
D307	8-719-000-26	DIODE US1060M
D308	8-719-000-26	DIODE US1060M
D309	8-719-000-26	DIODE US1060M
D310	8-719-000-26	DIODE US1060M
D311	8-719-933-48	(E)...DIODE HZS7B3L
D312	8-719-200-77	DIODE 10E2N
D401	8-719-200-77	DIODE 10E2N
D402	8-719-200-77	DIODE 10E2N
D403	8-719-200-77	DIODE 10E2N
D404	8-719-200-77	DIODE 10E2N
D405	8-719-200-77	DIODE 10E2N
D406	8-719-200-77	DIODE 10E2N
D407	8-719-933-77	DIODE HZS12B2L
D408	8-719-933-41	DIODE HZS6C3L
D409	8-719-933-50	DIODE HZS7C2L
D410	8-719-933-50	DIODE HZS7C2L
D411	8-719-200-77	DIODE 10E2N
D412	8-719-200-77	DIODE 10E2N
D413	8-719-000-26	DIODE US1060M
D414	8-719-000-26	DIODE US1060M
D415	8-719-970-06	DIODE MPR3371X
D416	8-719-970-06	DIODE MPR3371X
D417	8-719-970-07	DIODE MPG3371X

Ref.No.	Part No.	Description
D418	8-719-942-15	DIODE MPG3877S
D419	8-719-942-15	DIODE MPG3877S
D420	8-719-942-15	DIODE MPG3877S
D421	8-719-942-14	DIODE MAY3877S
D422	8-719-942-17	DIODE MPR3877S
D423	8-719-942-15	DIODE MPG3877S
D424	8-719-942-15	DIODE MPG3877S
D425	8-719-942-15	DIODE MPG3877S
D426	8-719-000-26	DIODE US1060M
IC81A	8-759-111-44	IC UPC4570C-1
IC81B	8-759-111-44	IC UPC4570C-1
IC301	8-759-939-73	IC BA3308
IC302	8-752-018-70	(AEP, US)...IC CX20187
IC303	8-752-032-60	IC CXA1198P
IC304	8-759-240-51	IC TC4051BP
IC305	8-759-601-41	IC M4053BP
IC306	8-759-601-02	IC M5218P
IC307	8-752-031-83	(E)...IC CXA1101P
IC401	8-752-804-34	IC CXP5048H-127S
IC402	8-759-240-52	IC TC4052BP
L41	1-410-780-11	INDUCTOR 27MMH
L61	1-410-780-11	INDUCTOR 27MMH
L401	1-408-080-00	INDUCTOR 100UH
LPF101	1-236-087-00	FILTER, LOW PASS
LPF201	1-236-087-00	FILTER, LOW PASS
Q11A	8-729-117-54	TRANSISTOR 2SA1175
Q11B	8-729-117-54	TRANSISTOR 2SA1175
Q12A	8-719-939-11	TRANSISTOR GP2S09-B
Q12B	8-719-939-11	TRANSISTOR GP2S09-B
Q81	8-729-801-93	TRANSISTOR 2SD1387
Q82	8-729-100-13	TRANSISTOR 2SC2001
Q83	8-729-100-13	TRANSISTOR 2SC2001
Q101	8-729-900-74	TRANSISTOR DTC143TS
Q102	8-729-600-27	TRANSISTOR 2SC634SP
Q103	8-729-900-80	TRANSISTOR DTC114ES
Q201	8-729-900-74	TRANSISTOR DTC143TS
Q202	8-729-600-27	TRANSISTOR 2SC634SP
Q203	8-729-900-80	TRANSISTOR DTC114ES
Q301	8-729-600-27	TRANSISTOR 2SC634SP
Q302	8-729-600-27	TRANSISTOR 2SC634SP
Q303	8-729-180-92	TRANSISTOR 2SD809K
Q304	8-729-117-54	TRANSISTOR 2SA1175
Q305	8-729-117-54	TRANSISTOR 2SA1175
Q306	8-729-173-13	TRANSISTOR 2SB731
Q307	8-729-900-89	TRANSISTOR DTC144ES
Q309	8-729-900-74	TRANSISTOR DTC143TS
Q310	8-729-117-54	TRANSISTOR 2SA1175
Q311	8-729-900-61	TRANSISTOR DTA114ES
Q312	8-729-900-65	TRANSISTOR DTA144ES
Q313	8-729-900-65	TRANSISTOR DTA144ES
Q314	8-729-900-65	TRANSISTOR DTA144ES
Q315	8-729-900-65	TRANSISTOR DTA144ES
Q316	8-729-900-65	TRANSISTOR DTA144ES
Q317	8-729-900-89	TRANSISTOR DTC144ES
Q318	8-729-201-56	TRANSISTOR 2SK246GR2
Q319	8-729-201-56	TRANSISTOR 2SK246GR2

Ref.No.	Part No.	Description
Q401	8-729-600-27	TRANSISTOR 2SC634SP
Q402	8-729-600-27	TRANSISTOR 2SC634SP
Q403	8-729-600-27	TRANSISTOR 2SC634SP
Q404	8-729-209-15	TRANSISTOR 2SD2012
Q405	8-729-600-27	TRANSISTOR 2SC634SP
Q406	8-729-209-15	TRANSISTOR 2SD2012
Q407	8-729-600-27	TRANSISTOR 2SC634SP
Q408	8-729-801-83	TRANSISTOR 2SB1013
Q409	8-729-801-83	TRANSISTOR 2SB1013
Q410	8-729-801-83	TRANSISTOR 2SB1013
Q411	8-729-801-83	TRANSISTOR 2SB1013
Q412	8-729-801-83	TRANSISTOR 2SB1013
Q413	8-729-900-74	TRANSISTOR DTC143TS
Q414	8-729-900-74	TRANSISTOR DTC143TS
Q415	8-729-900-61	TRANSISTOR DTA114ES
Q416	8-729-117-54	TRANSISTOR 2SA1175
Q417	8-729-900-74	TRANSISTOR DTC143TS
Q418	8-729-900-89	TRANSISTOR DTC144ES
Q419	8-729-900-89	TRANSISTOR DTC144ES
R11	1-215-424-00	CARBON 1.3K 5% 1/4W
R12	1-249-414-11	CARBON 560 5% 1/4W
R13	1-215-408-00	CARBON 300 5% 1/4W
R14A	1-249-408-11	CARBON 180 5% 1/4W
R14B	1-249-408-11	CARBON 180 5% 1/4W
R17A	1-249-437-11	CARBON 47K 5% 1/4W
R17B	1-249-437-11	CARBON 47K 5% 1/4W
R18A	1-249-437-11	CARBON 47K 5% 1/4W
R18B	1-249-437-11	CARBON 47K 5% 1/4W
R41A	1-247-881-00	CARBON 120K 5% 1/4W
R41B	1-247-881-00	CARBON 120K 5% 1/4W
R42A	1-249-405-11	CARBON 100 5% 1/4W
R42B	1-249-405-11	CARBON 100 5% 1/4W
R43A	1-215-472-00	CARBON 130K 5% 1/4W
R43B	1-215-472-00	CARBON 130K 5% 1/4W
R44A	1-249-426-11	CARBON 5.6K 5% 1/4W
R44B	1-249-426-11	CARBON 5.6K 5% 1/4W
R45	1-249-430-11	CARBON 12K 5% 1/4W
R61A	1-247-881-00	CARBON 120K 5% 1/4W
R61B	1-247-881-00	CARBON 120K 5% 1/4W
R62A	1-249-405-11	CARBON 100 5% 1/4W
R62B	1-249-405-11	CARBON 100 5% 1/4W
R63A	1-215-472-00	CARBON 130K 5% 1/4W
R63B	1-215-472-00	CARBON 130K 5% 1/4W
R64A	1-249-426-11	CARBON 5.6K 5% 1/4W
R64B	1-249-426-11	CARBON 5.6K 5% 1/4W
R65B	1-249-430-11	CARBON 12K 5% 1/4W
R81A	1-249-409-11	CARBON 220 5% 1/4W
R81B	1-249-409-11	CARBON 220 5% 1/4W
R82A	1-249-409-11	CARBON 220 5% 1/4W
R82B	1-249-409-11	CARBON 220 5% 1/4W
R83	1-249-429-11	CARBON 10K 5% 1/4W
R84	△1-212-849-00	FUSIBLE 4.7 5% 1/4W F
R85	1-249-435-11	CARBON 33K 5% 1/4W

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				
R86	1-249-435-11	CARBON	33K	5%	1/4W	
R101	1-249-437-11	CARBON	47K	5%	1/4W	
R102	1-249-417-11	CARBON	1K	5%	1/4W	
R103	1-249-437-11	CARBON	47K	5%	1/4W	
R104	1-249-417-11	CARBON	1K	5%	1/4W	
R105	1-249-423-11	CARBON	3.3K	5%	1/4W	
R106	1-215-440-00	(E).....CARBON	6.2K	5%	1/4W	
R106	1-249-426-11	(AEP, US)...CARBON	5.6K	5%	1/4W	
R107	1-249-414-11	(E).....CARBON	560	5%	1/4W	
R107	1-249-418-11	(AEP, US)...CARBON	1.2K	5%	1/4W	
R108	1-249-418-11	CARBON	1.2K	5%	1/4W	
R109	1-249-423-11	(AEP, US)...CARBON	3.3K	5%	1/4W	
R109	1-247-859-81	(E).....CARBON	15K	5%	1/4W	
R110	1-247-834-11	(AEP, US)...CARBON	1.3K	5%	1/4W	
R110	1-247-836-81	(E).....CARBON	1.6K	5%	1/4W	
R112	1-247-887-00	CARBON	220K	5%	1/4W	
R113	1-249-441-11	CARBON	100K	5%	1/4W	
R114	1-249-441-11	CARBON	100K	5%	1/4W	
R115	1-249-424-11	(AEP, US)...CARBON	3.9K	5%	1/4W	
R116	1-247-842-11	(AEP, US)...CARBON	3K	5%	1/4W	
R117	1-247-822-11	(AEP, US)...CARBON	430	5%	1/4W	
R118	1-249-427-11	(AEP, US)...CARBON	6.8K	5%	1/4W	
R119	1-249-415-11	(AEP, US)...CARBON	680	5%	1/4W	
R120	1-249-429-11	CARBON	10K	5%	1/4W	
R121	1-249-428-11	CARBON	8.2K	5%	1/4W	
R122	1-249-421-11	CARBON	2.2K	5%	1/4W	
R123	1-249-429-11	CARBON	10K	5%	1/4W	
R124	1-249-417-11	CARBON	1K	5%	1/4W	
R125	1-249-420-11	CARBON	1.8K	5%	1/4W	
R126	1-215-432-00	CARBON	3K	5%	1/4W	
R201	1-249-437-11	CARBON	47K	5%	1/4W	
R202	1-249-417-11	CARBON	1K	5%	1/4W	
R203	1-249-437-11	CARBON	47K	5%	1/4W	
R204	1-249-417-11	CARBON	1K	5%	1/4W	
R205	1-249-423-11	CARBON	3.3K	5%	1/4W	
R206	1-215-440-00	(E).....CARBON	6.2K	5%	1/4W	
R206	1-249-426-11	(AEP, US)...CARBON	5.6K	5%	1/4W	
R207	1-249-414-11	(E).....CARBON	560	5%	1/4W	
R207	1-249-418-11	(AEP, US)...CARBON	1.2K	5%	1/4W	
R208	1-249-418-11	CARBON	1.2K	5%	1/4W	
R209	1-249-423-11	(AEP, US)...CARBON	3.3K	5%	1/4W	
R209	1-247-859-81	(E).....CARBON	15K	5%	1/4W	
R210	1-247-834-11	(AEP, US)...CARBON	1.3K	5%	1/4W	
R210	1-247-836-81	(E).....CARBON	1.6K	5%	1/4W	
R212	1-247-887-00	CARBON	220K	5%	1/4W	
R213	1-249-441-11	CARBON	100K	5%	1/4W	
R214	1-249-441-11	CARBON	100K	5%	1/4W	
R215	1-249-424-11	(AEP, US)...CARBON	3.9K	5%	1/4W	
R216	1-247-842-11	(AEP, US)...CARBON	3K	5%	1/4W	
R217	1-247-822-11	(AEP, US)...CARBON	430	5%	1/4W	
R218	1-249-427-11	(AEP, US)...CARBON	6.8K	5%	1/4W	
R219	1-249-415-11	(AEP, US)...CARBON	680	5%	1/4W	
R220	1-249-429-11	CARBON	10K	5%	1/4W	
R221	1-249-428-11	CARBON	8.2K	5%	1/4W	

Ref.No.	Part No.	Description				
R222	1-249-421-11	CARBON	2.2K	5%	1/4W	
R223	1-249-429-11	CARBON	10K	5%	1/4W	
R224	1-249-417-11	CARBON	1K	5%	1/4W	
R225	1-249-420-11	CARBON	1.8K	5%	1/4W	
R226	1-247-842-81	CARBON	3K	5%	1/4W	
R301	1-249-417-11	CARBON	1K	5%	1/4W	
R302	1-249-417-11	CARBON	1K	5%	1/4W	
R303	1-249-430-11	CARBON	12K	5%	1/4W	
R304	1-249-429-11	CARBON	10K	5%	1/4W	
R305	1-249-417-11	CARBON	1K	5%	1/4W	
R306	1-249-437-11	CARBON	47K	5%	1/4W	
R307	1-249-439-11	CARBON	68K	5%	1/4W	
R308	1-249-427-11	CARBON	6.8K	5%	1/4W	
R309	1-249-423-11	CARBON	3.3K	5%	1/4W	
R310	1-249-418-11	CARBON	1.2K	5%	1/4W	
R311	1-247-903-00	CARBON	1M	5%	1/4W	
R312	1-247-903-00	CARBON	1M	5%	1/4W	
R313	1-249-405-11	CARBON	100	5%	1/4W	
R314	1-249-409-11	CARBON	220	5%	1/4W	
R315	1-249-441-11	(AEP, US)...CARBON	100K	5%	1/4W	
R316	1-249-441-11	CARBON	100K	5%	1/4W	
R317	1-249-411-11	CARBON	330	5%	1/4W	
R318	1-249-437-11	CARBON	47K	5%	1/4W	
R319	1-215-460-00	(E).....METAL	43K	5%	1/4W	
R319	1-215-469-00	(AEP, US)...METAL	100K	1%	1/6W	
R321	1-249-441-11	CARBON	100K	5%	1/4W	
R322	△ 1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R325	1-247-864-11	CARBON	24K	5%	1/4W	
R332	1-249-433-11	CARBON	22K	5%	1/4W	
R333	1-249-436-11	CARBON	39K	5%	1/4W	
R334	1-249-424-11	CARBON	27K	5%	1/4W	
R335	1-247-874-11	CARBON	62K	5%	1/4W	
R336	1-247-870-11	CARBON	43K	5%	1/4W	
R337	1-247-881-00	CARBON	120K	5%	1/4W	
R338	1-247-870-11	CARBON	43K	5%	1/4W	
R339	1-247-872-11	CARBON	51K	5%	1/4W	
R340	1-247-870-11	CARBON	43K	5%	1/4W	
R341	1-249-438-11	CARBON	56K	5%	1/4W	
R342	1-249-437-11	CARBON	47K	5%	1/4W	
R343	1-247-881-00	CARBON	120K	5%	1/4W	
R344	1-249-437-11	CARBON	47K	5%	1/4W	
R345	1-249-439-11	CARBON	68K	5%	1/4W	
R346	1-247-864-11	CARBON	24K	5%	1/4W	
R347	1-249-437-11	CARBON	47K	5%	1/4W	
R348	1-249-438-11	CARBON	56K	5%	1/4W	
R349	1-247-880-11	CARBON	110K	5%	1/4W	
R350	1-249-435-11	CARBON	33K	5%	1/4W	
R351	1-249-435-11	CARBON	33K	5%	1/4W	
R352	1-249-439-11	CARBON	110K	5%	1/4W	
R353	1-247-885-11	CARBON	180K	5%	1/4W	
R354	1-247-874-11	CARBON	62K	5%	1/4W	
R355	1-249-441-11	CARBON	100K	5%	1/4W	
R356	1-247-874-11	CARBON	62K	5%	1/4W	
R357	1-247-870-11	CARBON	43K	5%	1/4W	
R358	1-247-882-11	CARBON	130K	5%	1/4W	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				
R359	1-247-885-00	CARBON	180K	5%	1/4W	
R360	1-247-874-11	CARBON	62K	5%	1/4W	
R361	1-247-883-00	CARBON	150K	5%	1/4W	
R362	1-247-874-11	CARBON	62K	5%	1/4W	
R363	1-247-872-11	CARBON	51K	5%	1/4W	
R364	1-249-437-11	CARBON	47K	5%	1/4W	
R365	1-247-876-11	CARBON	75K	5%	1/4W	
R366	1-247-880-11	CARBON	110K	5%	1/4W	
R367	1-247-887-00	CARBON	220K	5%	1/4W	
R370	1-247-887-00	CARBON	220K	5%	1/4W	
R371	1-247-887-00	CARBON	220K	5%	1/4W	
R372	1-249-441-11	CARBON	100K	5%	1/4W	
R373	1-249-429-11	CARBON	10K	5%	1/4W	
R374	1-249-428-11	CARBON	8.2K	5%	1/4W	
R375	1-249-423-11	CARBON	3.3K	5%	1/4W	
R376	1-249-441-11	CARBON	100K	5%	1/4W	
R377	1-249-441-11	CARBON	100K	5%	1/4W	
R378	1-249-417-11	CARBON	1K	5%	1/4W	
R379	1-249-429-11	CARBON	10K	5%	1/4W	
R380	1-249-441-11	CARBON	100K	5%	1/4W	
R381	1-249-417-11	CARBON	1K	5%	1/4W	
R382	1-247-862-11	CARBON	20K	5%	1/4W	
R384	1-249-409-11	CARBON	220	5%	1/4W	
R385	1-249-409-11	CARBON	220	5%	1/4W	
R386	1-249-433-11	CARBON	22K	5%	1/4W	
R387	1-249-429-11	CARBON	10K	5%	1/4W	
R388	1-249-429-11	CARBON	10K	5%	1/4W	
R389	1-249-433-11	CARBON	22K	5%	1/4W	
R390	1-249-427-11	CARBON	6.8K	5%	1/4W	
R391	1-249-427-11	CARBON	6.8K	5%	1/4W	
R392	1-249-427-11	CARBON	6.8K	5%	1/4W	
R393	1-249-427-11	CARBON	6.8K	5%	1/4W	
R394	1-249-433-11	CARBON	22K	5%	1/4W	
R395	1-249-433-11	CARBON	22K	5%	1/4W	
R396	1-249-417-11	CARBON	1K	5%	1/4W	
R401	1-249-429-11	CARBON	10K	5%	1/4W	
R402	1-249-417-11	CARBON	1K	5%	1/4W	
R403	1-249-431-11	CARBON	15K	5%	1/4W	
R404	1-249-399-11	CARBON	33	5%	1/4W	
R405	1-249-423-11	CARBON	3.3K	5%	1/4W	
R406	△1-213-036-51	FUSIBLE	1		1W	F
R407	1-249-417-11	CARBON	1K	5%	1/4W	
R408	1-249-425-11	CARBON	4.7K	5%	1/4W	
R409	1-249-417-11	CARBON	1K	5%	1/4W	
R410	△1-217-490-00	FUSIBLE	56	5%	1W	F
R412	1-249-433-11	CARBON	22K	5%	1/4W	

Ref.No.	Part No.	Description				
R413	1-249-417-11	CARBON	1K	5%	1/4W	
R414	1-249-429-11	CARBON	10K	5%	1/4W	
R415	1-249-421-11	CARBON	2.2K	5%	1/4W	
R416	1-249-429-11	CARBON	10K	5%	1/4W	
R417	1-249-417-11	CARBON	1K	5%	1/4W	
R418	1-249-429-11	CARBON	10K	5%	1/4W	
R419	1-249-421-11	CARBON	2.2K	5%	1/4W	
R420	1-249-429-11	CARBON	10K	5%	1/4W	
R421	1-249-417-11	CARBON	1K	5%	1/4W	
R422	1-249-429-11	CARBON	10K	5%	1/4W	
R423	1-249-441-11	CARBON	100K	5%	1/4W	
R424	1-247-887-00	CARBON	220K	5%	1/4W	
R426	1-249-441-11	CARBON	100K	5%	1/4W	
R427	1-247-887-00	CARBON	220K	5%	1/4W	
R429	1-249-432-11	CARBON	18K	5%	1/4W	
R430	1-249-430-11	CARBON	12K	5%	1/4W	
R431	1-249-433-11	CARBON	22K	5%	1/4W	
R432	1-249-425-11	CARBON	4.7K	5%	1/4W	
R433	1-249-411-11	CARBON	330	5%	1/4W	
R434	1-249-411-11	CARBON	330	5%	1/4W	
R435	1-249-409-11	CARBON	220	5%	1/4W	
R436	1-249-408-11	CARBON	180	5%	1/4W	
R437	1-249-408-11	CARBON	180	5%	1/4W	
R438	1-249-408-11	CARBON	180	5%	1/4W	
R439	1-249-409-11	CARBON	220	5%	1/4W	
R440	1-249-411-11	CARBON	330	5%	1/4W	
R441	1-249-408-11	CARBON	180	5%	1/4W	
R442	1-249-408-11	CARBON	180	5%	1/4W	
R443	1-249-408-11	CARBON	180	5%	1/4W	
R444	1-249-437-11	CARBON	47K	5%	1/4W	
R445	1-249-437-11	CARBON	47K	5%	1/4W	
R446	1-249-423-11	CARBON	3.3K	5%	1/4W	
R447	1-249-429-11	CARBON	10K	5%	1/4W	
R448	1-249-425-11	CARBON	4.7K	5%	1/4W	
R449	1-249-429-11	CARBON	10K	5%	1/4W	
R450	1-249-429-11	CARBON	10K	5%	1/4W	
R453	1-249-417-11	CARBON	1K	5%	1/4W	
R454	1-249-420-11	CARBON	1.8K	5%	1/4W	
R455	1-249-430-11	CARBON	12K	5%	1/4W	
R456	1-249-417-11	CARBON	1K	5%	1/4W	
R457	1-249-420-11	CARBON	1.8K	5%	1/4W	
R458	1-249-423-11	CARBON	3.3K	5%	1/4W	
R459	1-249-417-11	CARBON	1K	5%	1/4W	
R460	1-249-420-11	CARBON	1.8K	5%	1/4W	
R461	1-249-423-11	CARBON	3.3K	5%	1/4W	

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

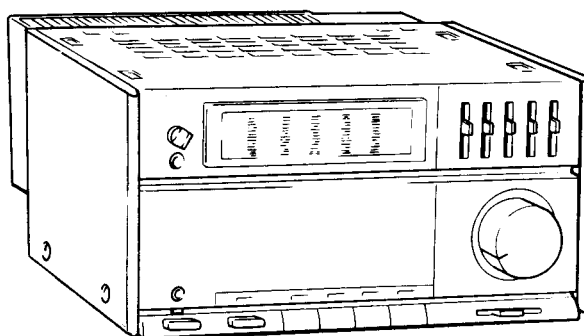
<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>
R462	1-249-417-11	CARBON 1K 5% 1/4W
R463	1-249-420-11	CARBON 1.8K 5% 1/4W
R464	1-249-417-11	CARBON 1K 5% 1/4W
R465	1-249-420-11	CARBON 1.8K 5% 1/4W
R466	1-249-422-11	CARBON 2.7K 5% 1/4W
R467	1-249-411-11	CARBON 330 5% 1/4W
R468	1-249-411-11	CARBON 330 5% 1/4W
R469	1-249-411-11	CARBON 330 5% 1/4W
R470	1-249-411-11	CARBON 330 5% 1/4W
R471	1-249-411-11	CARBON 330 5% 1/4W
R472	1-249-411-11	CARBON 330 5% 1/4W
RV41A	1-228-989-00	RES, ADJ, CARBON 470
RV41B	1-228-989-00	RES, ADJ, CARBON 470
RV42	1-230-725-11	RES, ADJ, CARBON 220K
RV61A	1-228-989-00	RES, ADJ, CARBON 470
RV61B	1-228-989-00	RES, ADJ, CARBON 470
RV62	1-230-725-11	RES, ADJ, CARBON 220K
RV101	1-228-995-00	RES, ADJ, CARBON 22K
RV201	1-228-995-00	RES, ADJ, CARBON 22K
RY81	1-515-614-11	RELAY
S11A	1-571-281-21	SWITCH, LEAF
S11B	1-571-281-21	SWITCH, LEAF
S12	1-571-281-21	SWITCH, LEAF
S13	1-571-281-21	SWITCH, LEAF
S14A	1-571-281-21	SWITCH, LEAF
S14B	1-571-281-21	SWITCH, LEAF
S15	1-571-281-21	SWITCH, LEAF
S301	1-554-277-00	SWITCH, SLIDE
S302	1-570-835-11	(AEP, US)...SWITCH, SLIDE
S302	1-570-845-11	(E).....SEITCH, SLIDE
S401	1-570-835-11	SWITCH, SLIDE
S402	1-553-856-00	SWITCH, KEY BOARD
S403	1-553-856-00	SWITCH, KEY BOARD
S404	1-553-856-00	SWITCH, KEY BOARD
S405	1-553-856-00	SWITCH, KEY BOARD
S406	1-553-856-00	SWITCH, KEY BOARD

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>
S407	1-553-856-00	SWITCH, KEY BOARD
S408	1-553-856-00	SWITCH, KEY BOARD
S409	1-553-856-00	SWITCH, KEY BOARD
S410	1-553-856-00	SWITCH, KEY BOARD
S411	1-553-856-00	SWITCH, KEY BOARD
S412	1-553-856-00	SWITCH, KEY BOARD
S413	1-553-856-00	SWITCH, KEY BOARD
S414	1-553-856-00	SWITCH, KEY BOARD
S415	1-553-856-00	SWITCH, KEY BOARD
S416	1-553-856-00	SWITCH, KEY BOARD
S417	1-553-856-00	SWITCH, KEY BOARD
SPK101	1-235-186-00	(AEP, US)...ENCAPSULATED COMPONENT
SPK201	1-235-186-00	(AEP, US)...ENCAPSULATED COMPONENT
T81B	1-433-337-11	TRANSFORMER, BIAS OSCILLATION
TP1	*1-564-505-11	PLUG, CONNECTOR 2P
X401	1-567-772-11	VIBRATOR, CERAMIC

TA-808M

SERVICE MANUAL

*US Model
West Germany Model*



- TA-808M is the INTEGRATED STEREO AMPLIFIER in MHC-3000/3000CD.

SPECIFICATIONS

AUDIO POWER SPECIFICATION (US model) POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6 ohm loads both channels driven, from 50 – 20,000 Hz; rated 30 watts per channel minimum RMS power, with no more than 1% total harmonic distortion from 250 miliwatts to rated output.

Inputs

Input jacks	Jack type	Sensitivity	Impedance
PHONO	Phono	250 mV	50 kohms
CD	Phono	450 mV	50 kohms
MIC	Stereo mini	1 mV	600 ohms

Outputs

HEADPHONES (stereo phone jack)	Accepts headphones of 8 ohms or more
SPEAKER	Accepts speakers of 6 to 16 ohms

General

Power requirements	US model: 120V AC, 60Hz West Germany model: 220V AC, 50Hz
Power consumption	US model: 95W West Germany model: 110W
Dimensions	Approx. 245 x 120 x 285 mm (w/h/d) (9 ³ / ₄ x 4 ³ / ₄ x 11 ¹ / ₄ inches) incl. projecting parts and controls
Weight	Approx. 4.5 kg (10lb) net

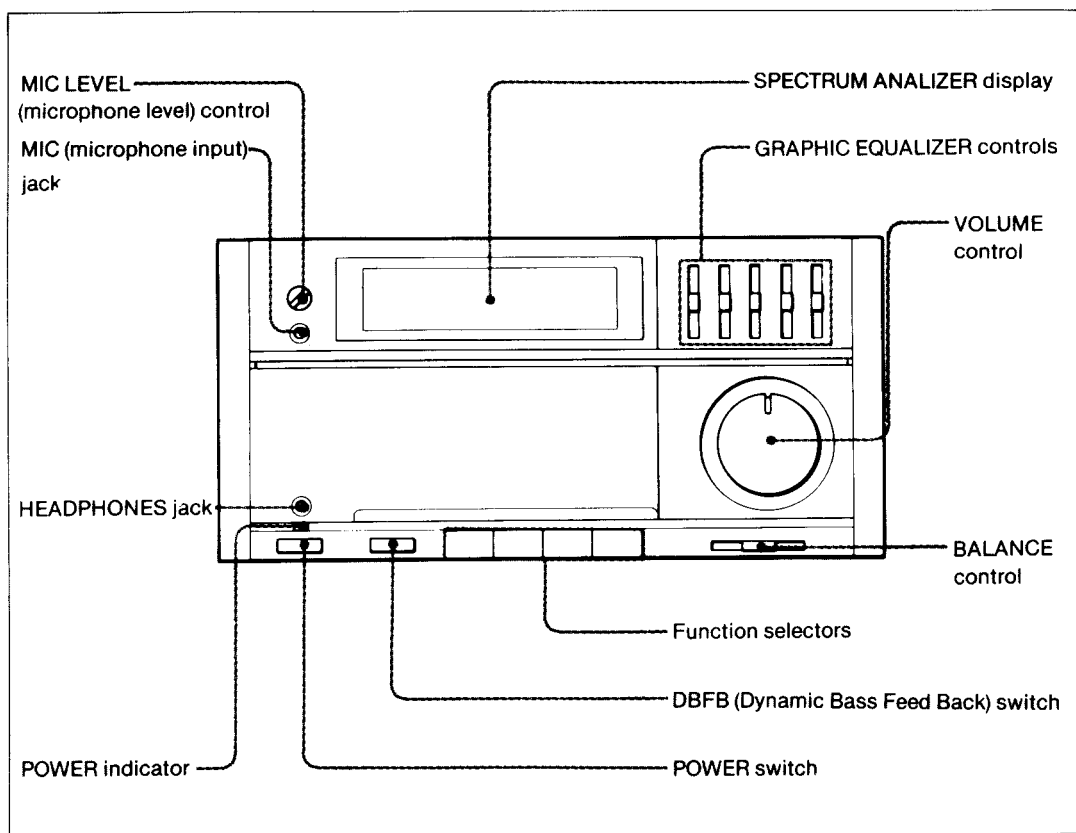
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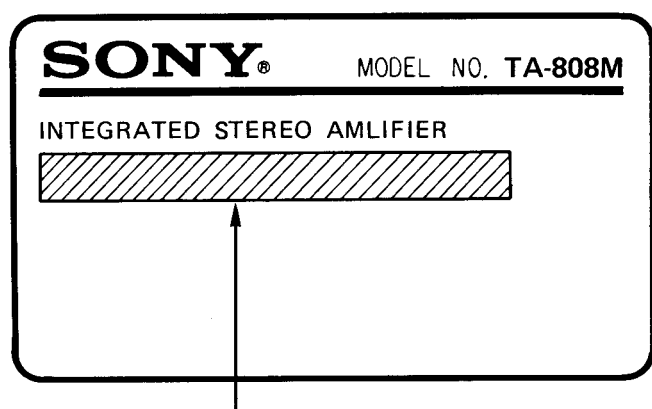


INTEGRATED STEREO AMPLIFIER
SONY®

LOCATION AND FUNCTION OF CONTROLS



—MODEL IDENTIFICATION— (Specification Label)



{	US model:	AC 120V	60Hz	95W
	West Germany model:	AC 220V	50Hz	110W

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

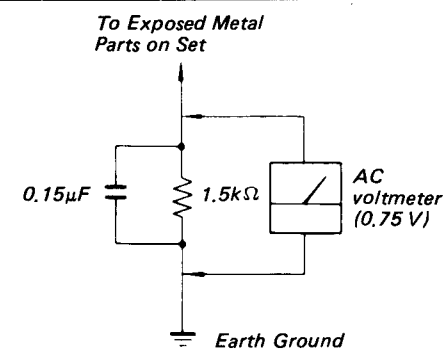


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1

EXPLODED VIEWS

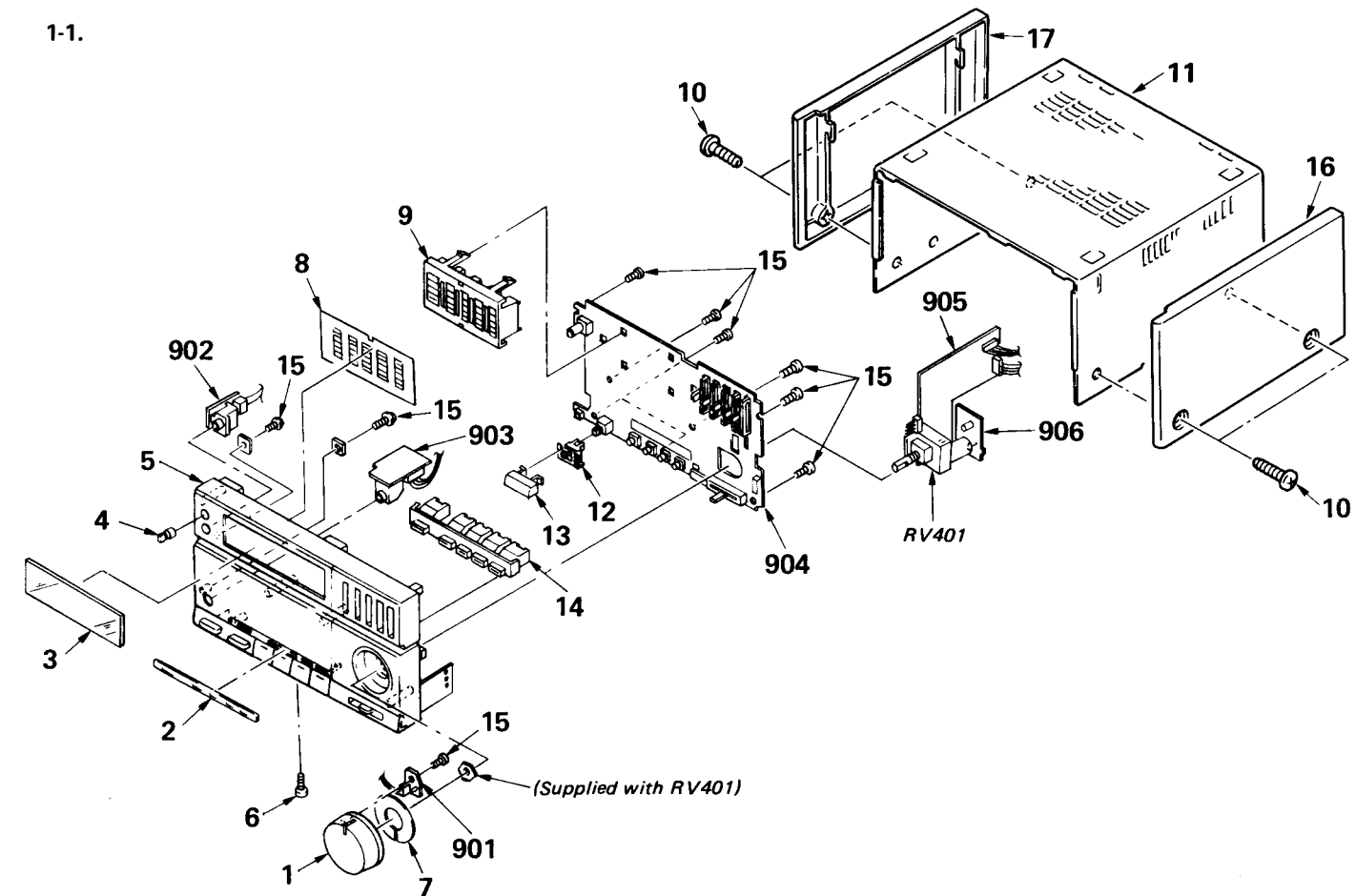
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)

↑		↑
Cabinet's Color		Parts Color

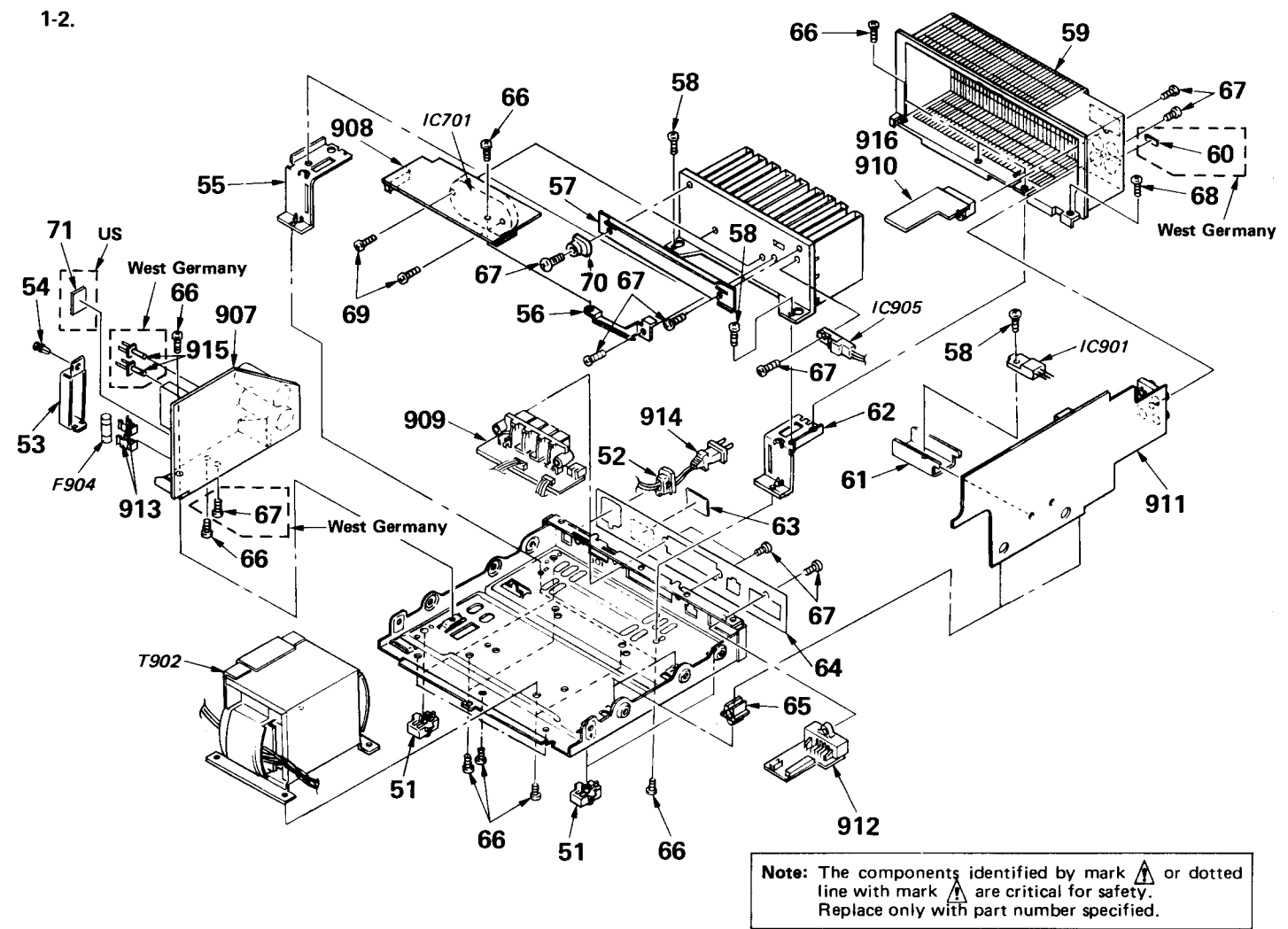
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-922-790-01	KNOB (VOLUME)		13	4-914-388-31	BUTTON (DBFB)	
2	4-920-880-01	PLATE (F), INDICATION		14	*4-920-882-01	HOUSE (F), LIGHTING	
3	4-922-758-01	PLATE (S.A), ORNAMENTAL		15	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
4	4-920-877-02	KNOB (VOL)(MIC LEVEL)		16	4-925-524-01	PLATE (B-R), SIDE	
5	X-4919-671-1	(West Germany)... PANEL ASSY		17	4-925-525-01	PLATE (B-L), SIDE	
5	X-4919-664-3	(US)..... PANEL ASSY					
6	7-685-870-01	SCREW +BVTT 3X5 (S)		901	*1-625-875-11	PC BOARD, LED	
7	4-925-554-01	SPACER		902	*1-625-872-11	PC BOARD, MIC	
8	4-922-757-01	PLATE (S.A), INDICATION		903	*1-625-878-11	PC BOARD, HP	
9	*4-920-881-01	HOUSE (S.A), LIGHTING		904	*A-4375-352-A	MOUNTED PCB, PANEL	
10	4-886-821-51	SCREW, CASE, (M3X14)		905	*1-625-873-11	PC BOARD, VOL	
11	4-920-118-01	CASE		906	*1-625-874-11	PC BOARD, MOTOR	
12	*4-920-879-01	JOINT (D)		RV401	1-238-061-11	RES, VAR CARBON 50K/50K (VOLUME)	

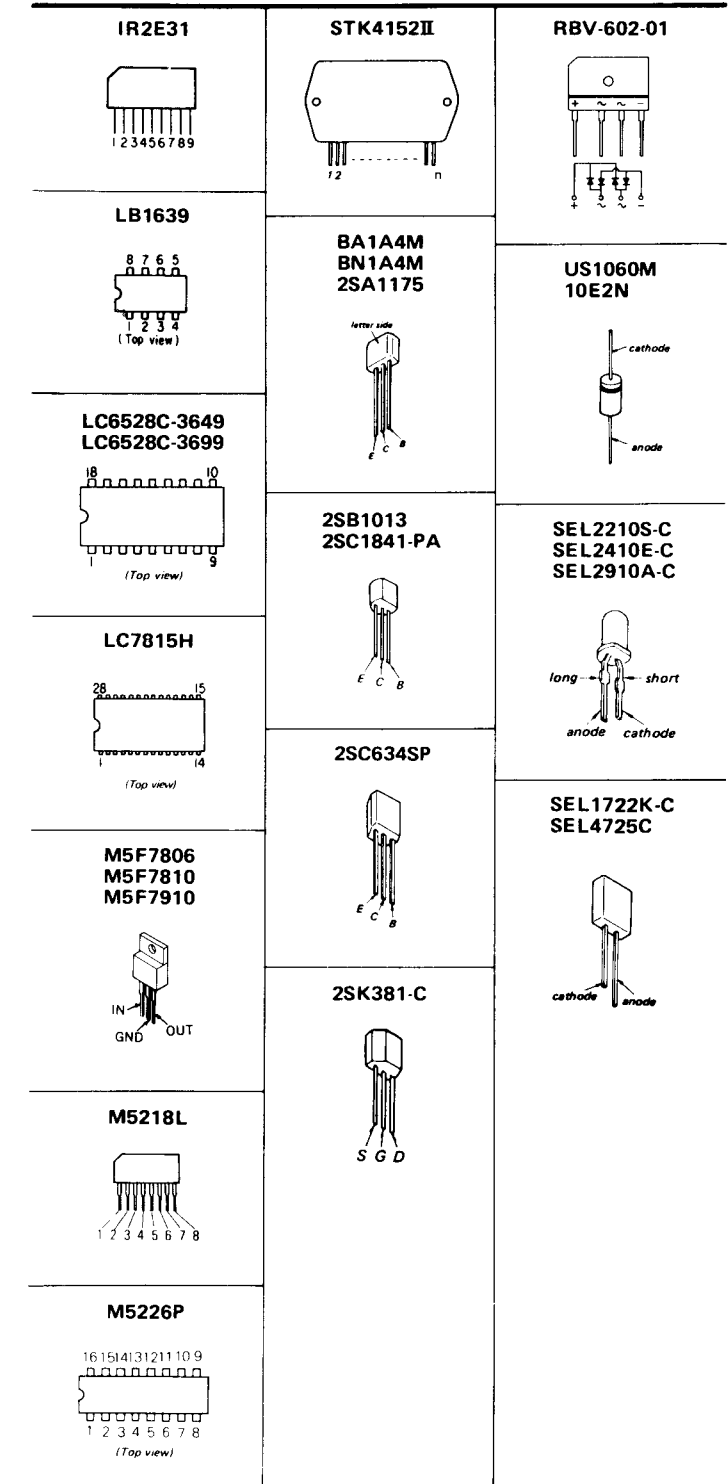
SECTION 2
DIAGRAMS

1-2.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	X-4902-937-1	FOOT ASSY, RUBBER		68	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
52	*3-703-244-00	BUSHING (2104), CORD		69	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
53	*4-922-787-01	COVER (INSULATING)		70	*4-925-538-01	BUSHING	
54	3-531-576-01	RIVET		71	3-701-946-23	(US)... LABEL, FUSE	
				907	*1-625-879-11	PC BOARD, FUSE	
55	*4-914-393-01	BRACKET (LEFT), HEAT SINK		908	*A-4388-707-A	(West Germany)... MOUNTED PCB, POWER	
56	*4-910-064-01	BRACKET (H), PC BOARD			*A-4388-708-A	(US)... MOUNTED PCB, POWER	
57	*4-920-112-01	PLATE, BLOCK		909	*1-625-877-11	PC BOARD, SP	
58	7-682-548-04	SCREW +BVTT 3X8 (S)		910	*A-4410-662-A	MOUNTED PCB, ST	916
59	*4-920-116-11	PLATE, JACK		911	*A-4394-461-A	(US)... MOUNTED PCB, REG	
60	*4-920-876-01	(West Germany)... LABEL (PHONO)			*A-4394-462-A	(West Germany)... MOUNTED PCB, REG	
61	*4-880-403-11	HEAT SINK		912	*1-625-869-11	PC BOARD, TC	
62	*4-914-394-01	BRACKET (RIGHT), HEAT SINK		913	*1-533-183-11	HOLDER, FUSE	
63	*4-922-730-01	(US)... LABEL, MODEL NUMBER		914	*1-555-750-00	(West Germany)... CORD, POWER	
	*4-922-728-01	(West Germany)... LABEL, MODEL NUMBER		914	*1-559-819-11	(US)... CORD, POWER	
64	*4-920-885-01	COVER, REAR		915	*1-535-476-11	(West Germany)... TERMINAL	
65	*3-642-310-00	HOLDER, CIRCUIT BOARD		916	*1-625-870-11	PC BOARD, ST	
66	7-682-147-01	SCREW +BVTT 3X6 (S)		F904	*1-532-285-00	(West Germany)... FUSE, TIME-LAG 1.25A	
67	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S		F904	*1-532-743-11	(US)... FUSE, GLASS TUBE 2A	
				IC701	*8-749-941-52	IC STK4152II	
				IC901	8-759-604-50	IC M5F7910	
				IC905	8-759-604-32	IC M5F7810	
				T902	*1-449-193-11	(West Germany)... TRANSFORMER, POWER	
				T902	*1-449-288-11	(US)... TRANSFORMER, POWER	

2-1. SEMICONDUCTOR LEAD LAYOUTS



• SEMICONDUCTOR LOCATIONS

Ref. No.	Location	Ref. No.	Location
D301	J-10	D903	D-3
D302	J-10	D904	D-3
D303	J-10	D905	D-3
D304	J-10	D906	F-2
D305	J-10	D907	I-20
D306	J-11	D908	I-20
D307	J-11	D909	I-21
D308	J-11	D910	I-21
D309	J-11	D911	H-21
D310	J-11	D912	H-21
D311	J-11	D913	G-21
D312	J-11	D914	G-21
D313	J-11		
D314	J-11	IC301	J-10
D315	J-11	IC302	J-10
D316	J-12	IC303	J-11
D317	J-12	IC304	J-12
D318	J-12	IC305	J-12
D319	J-12	IC306	H-9
D320	J-12	IC307	H-11
D321	J-12	IC308	H-12
D322	J-12	IC309	H-13
D323	J-12	IC401	E-15
D324	J-12	IC402	C-15
D325	J-12	IC403	D-14
D326	G-10	IC601	E-19
D327	G-11	IC602	E-21
D328	G-12	IC603	C-20
D329	G-12	IC701	D-8
D330	G-13	IC901	G-22
D331	G-8	IC902	H-20
D332	H-9	IC905	H-23
D401	J-17		
D601	D-18	Q151	B-18
D602	D-18	Q201	B-7
D603	F-21	Q301	G-9
D604	D-20	Q401	E-14
D605	E-21	Q402	E-14
D606	E-21	Q403	C-15
D607	E-21	Q404	C-15
D701	D-6	Q405	E-15
D702	D-10	Q601	B-19
D703	E-9	Q701	D-6
D704	E-10	Q702	D-7
D705	E-10	Q703	D-7
D706	E-8	Q704	E-10
D901	E-2	Q705	E-10
D902	D-3	Q901	F-2

2-2. PRINTED WIRING BOARDS

- See page 6 for semiconductor lead layouts.
- See page 6 for semiconductor locations.

【FUSE BOARD】

【SPEAKER BOARD】

J201 FOR CD
ST FUNCTION : 1
DIGITAL GND : 2
SIRCS : 3
DIGITAL GND : 4

J202 SPEAKER
IMPEDANCE USE 6-16Ω

【POWER AMP BOARD】

【MOTOR BOARD】

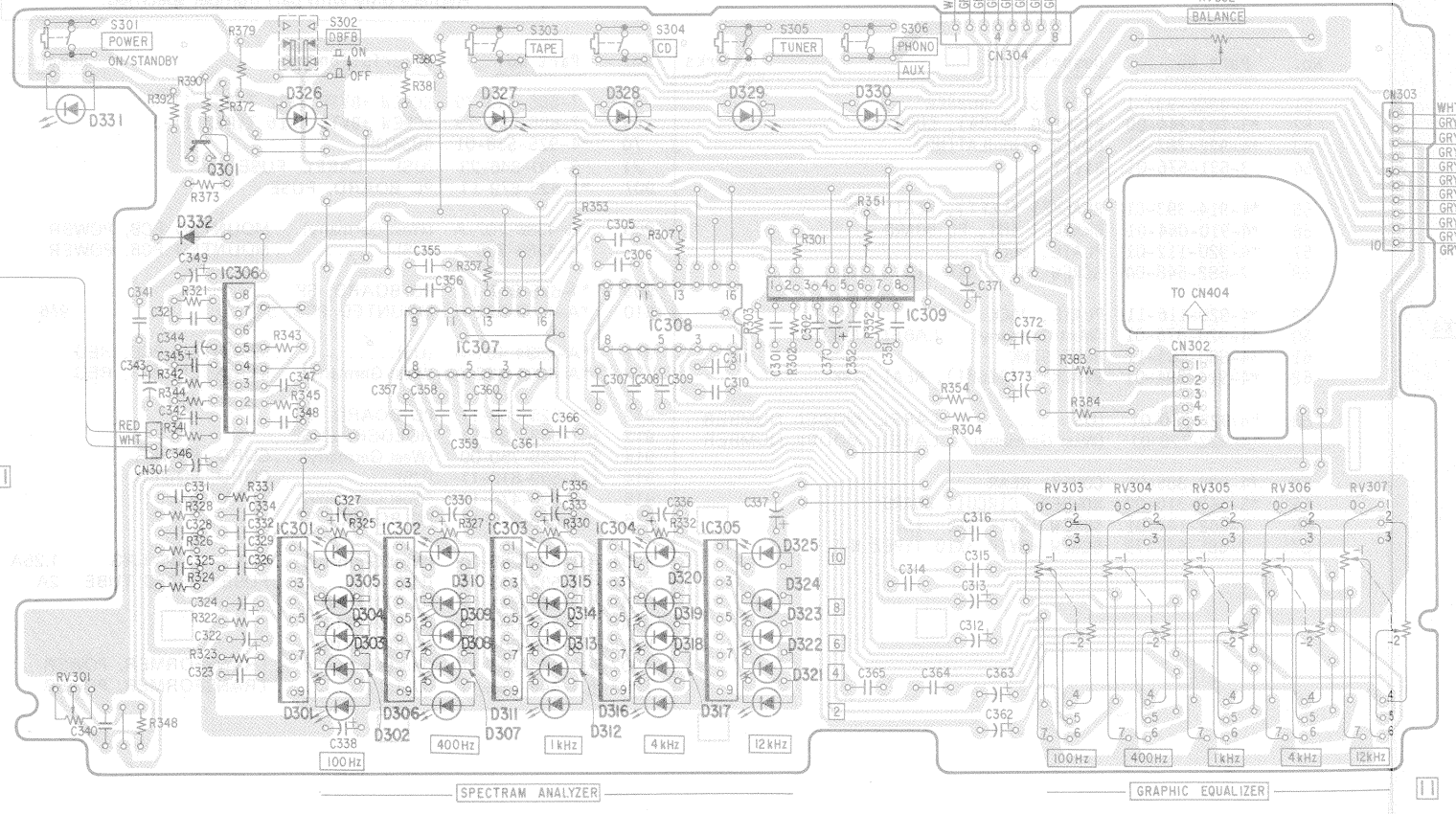
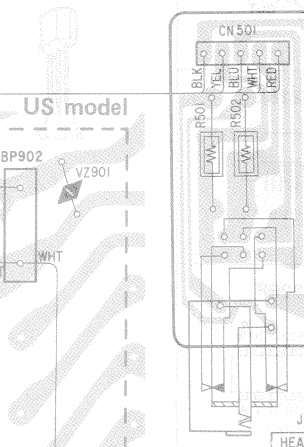
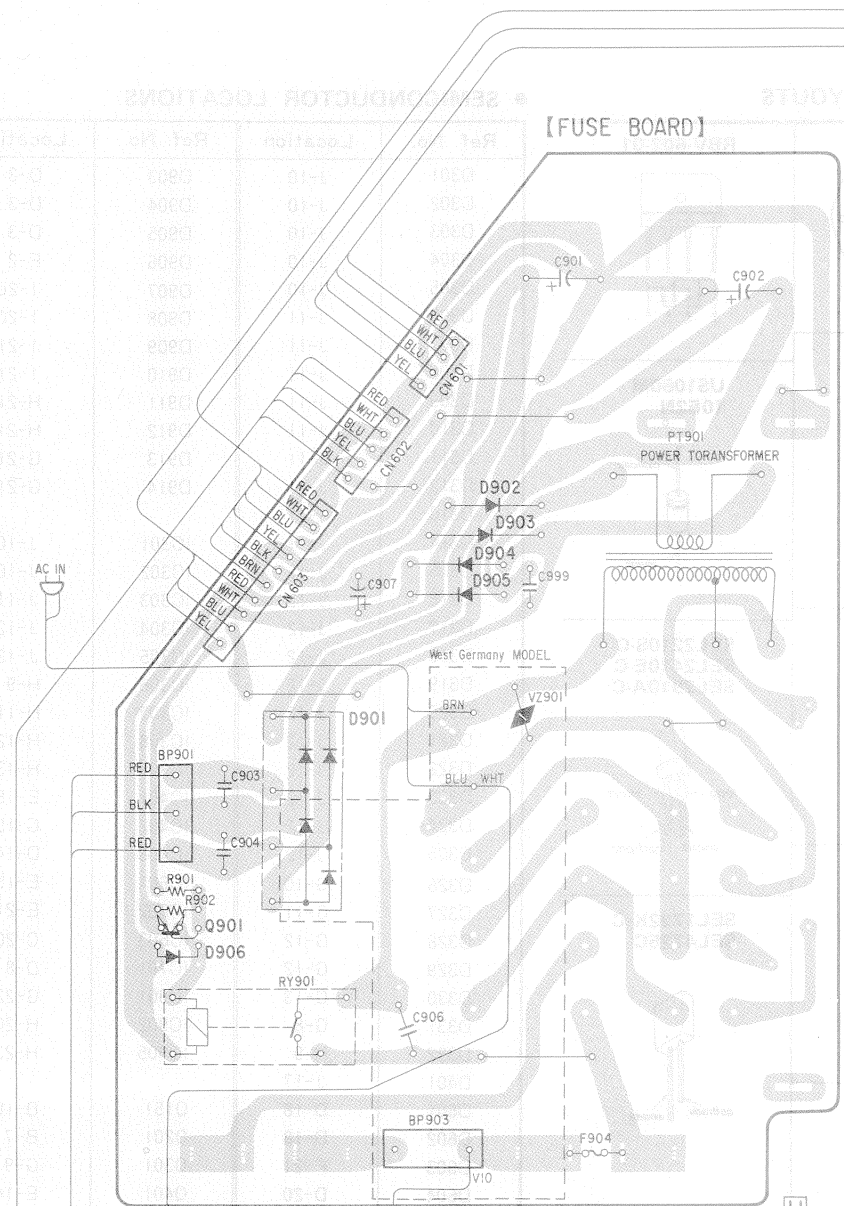
【VOLUME BOARD】

【PANEL BOARD】

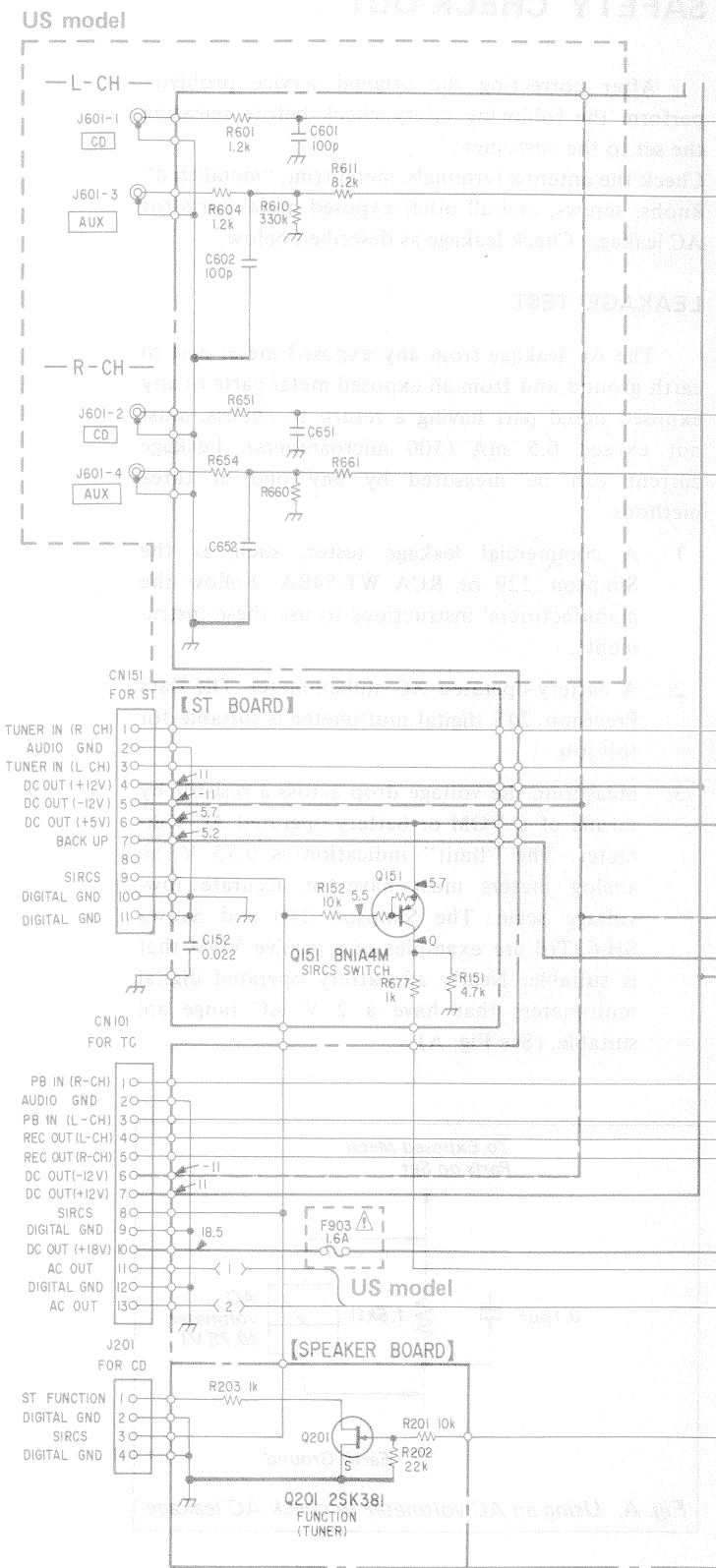
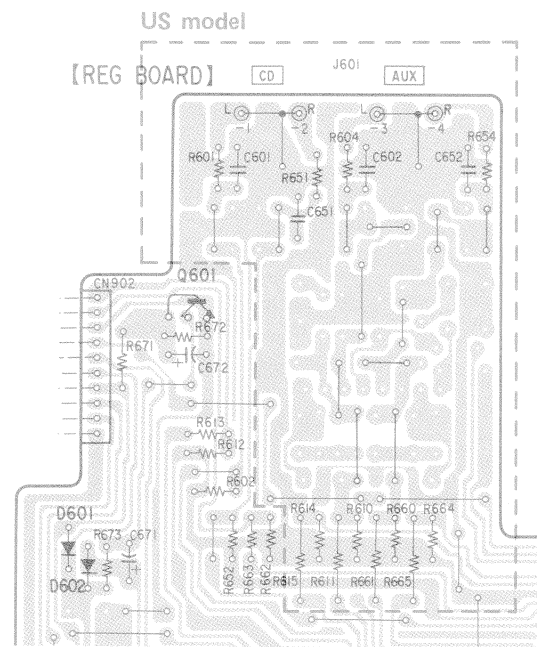
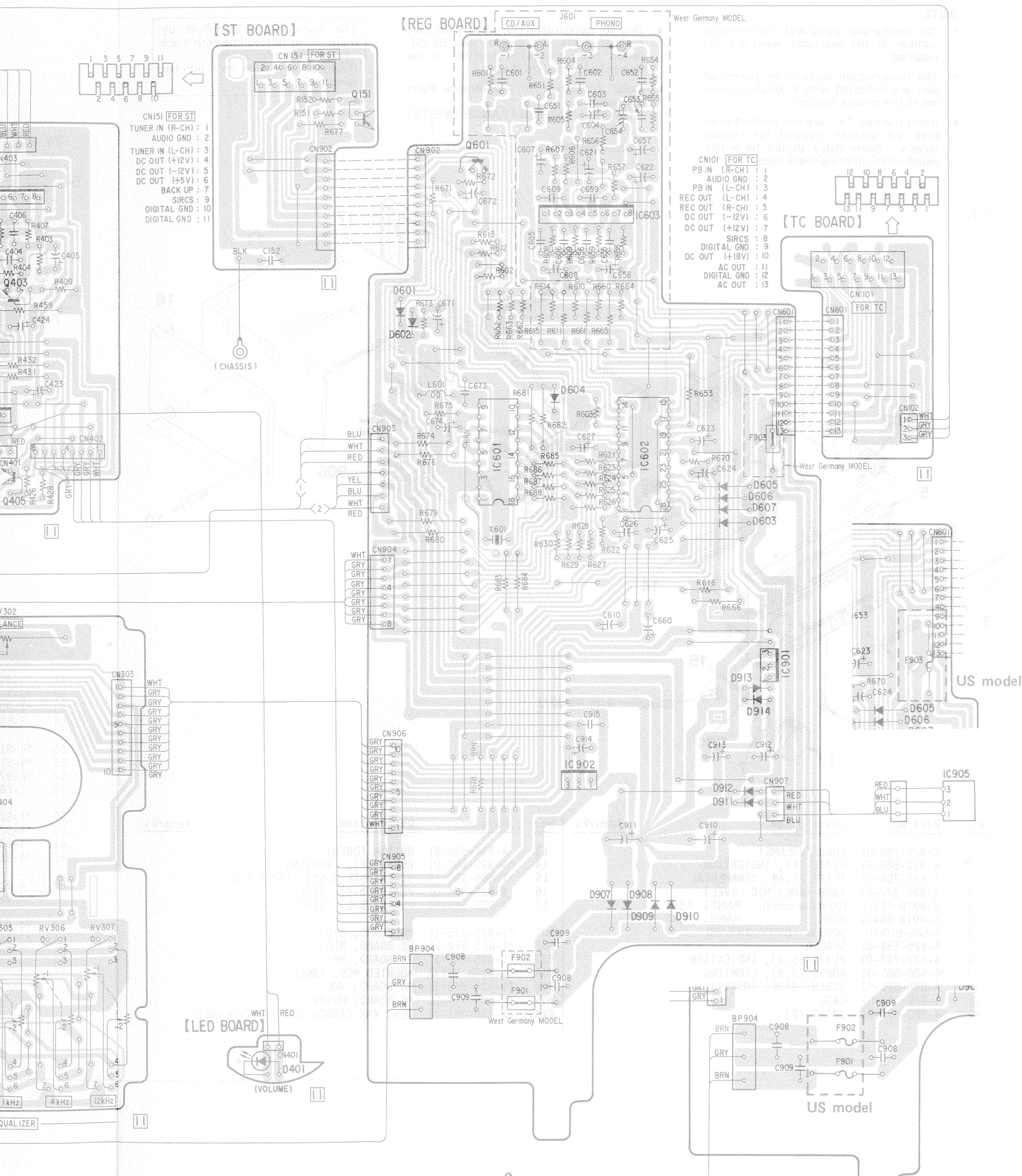
【HEADPHONE BOARD】

【MIC BOARD】

US model

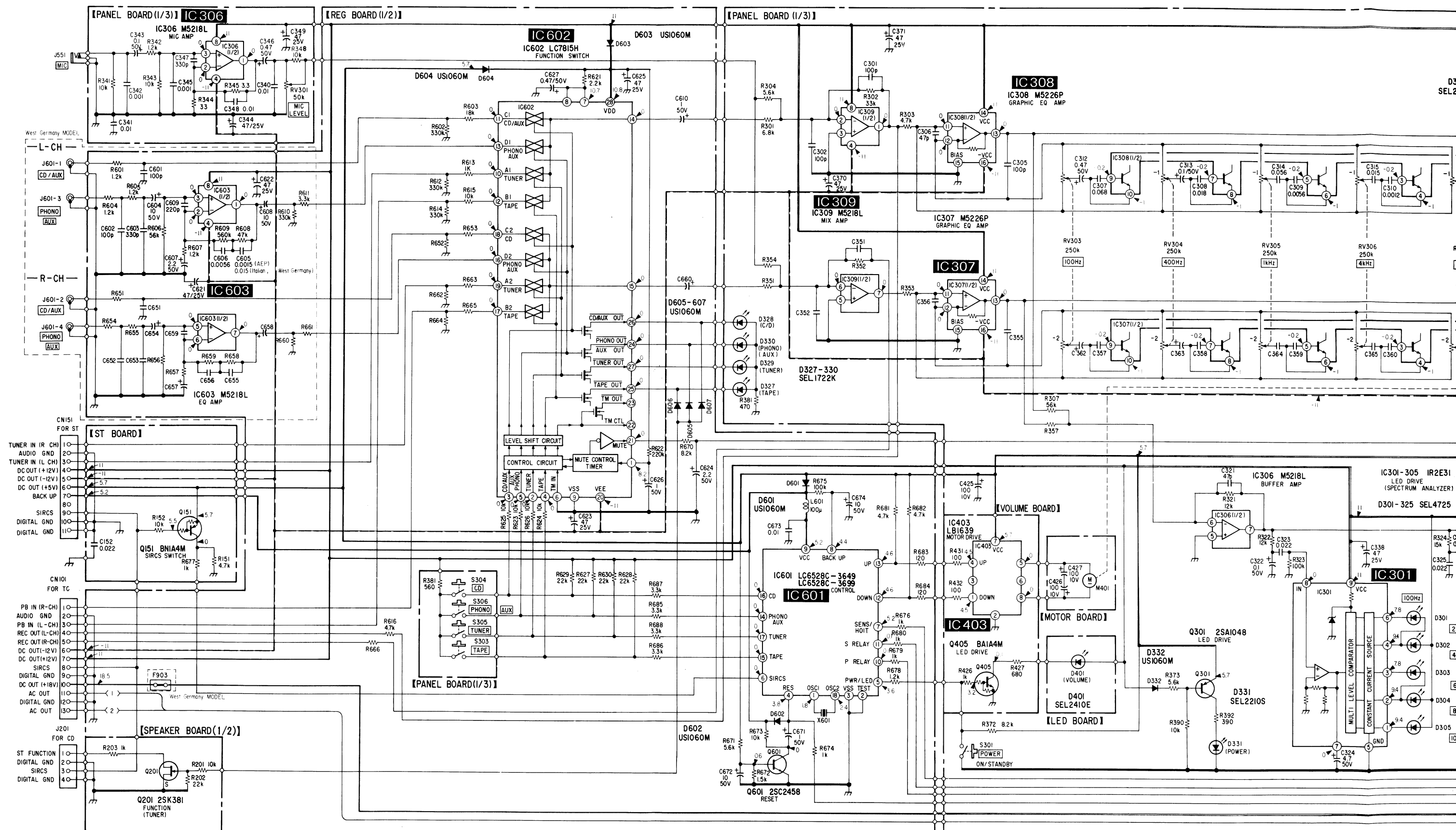


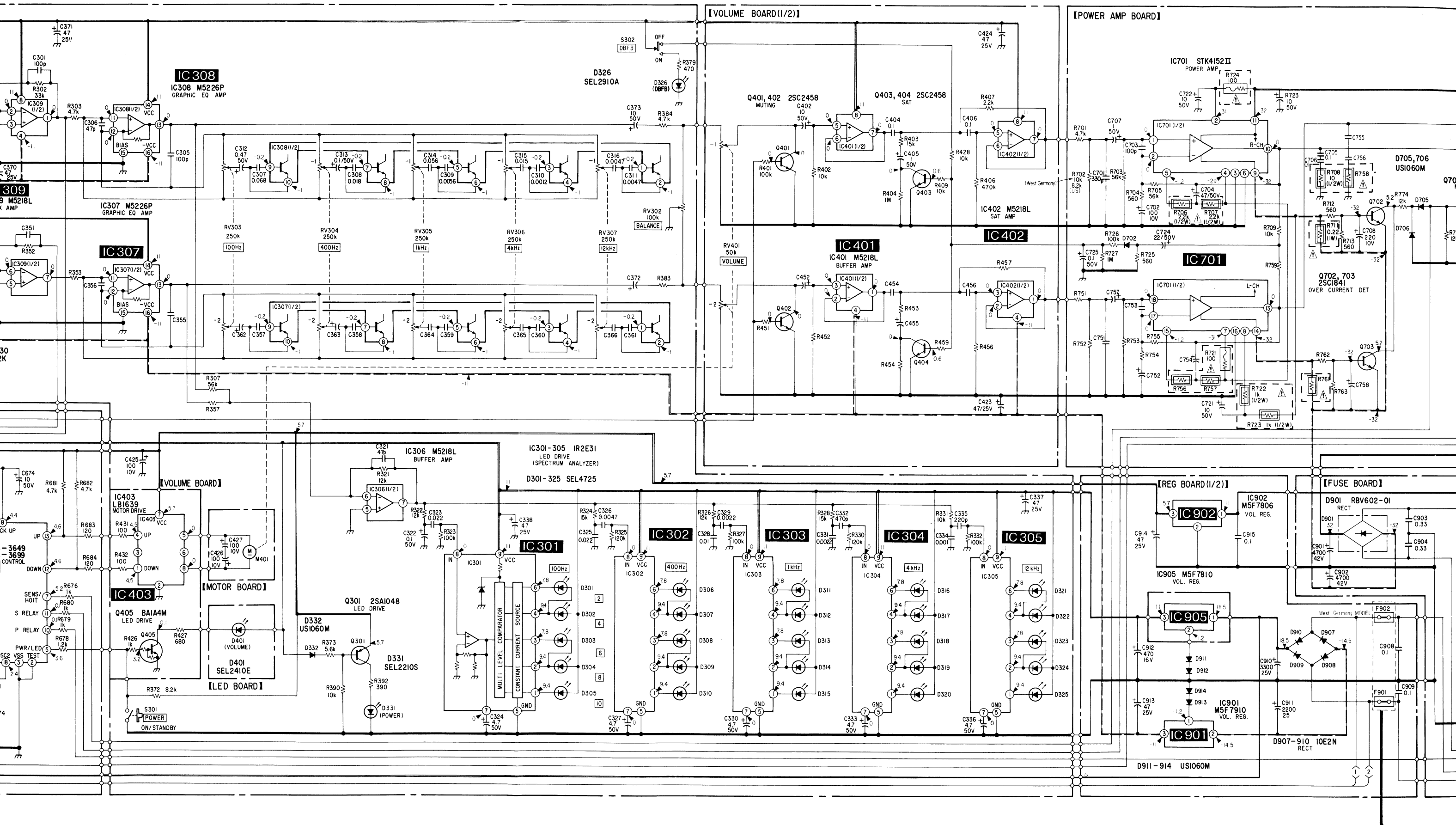
Note:
○ — : parts extracted from the component side.

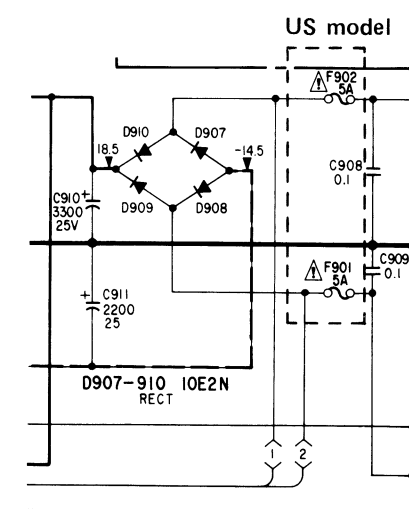
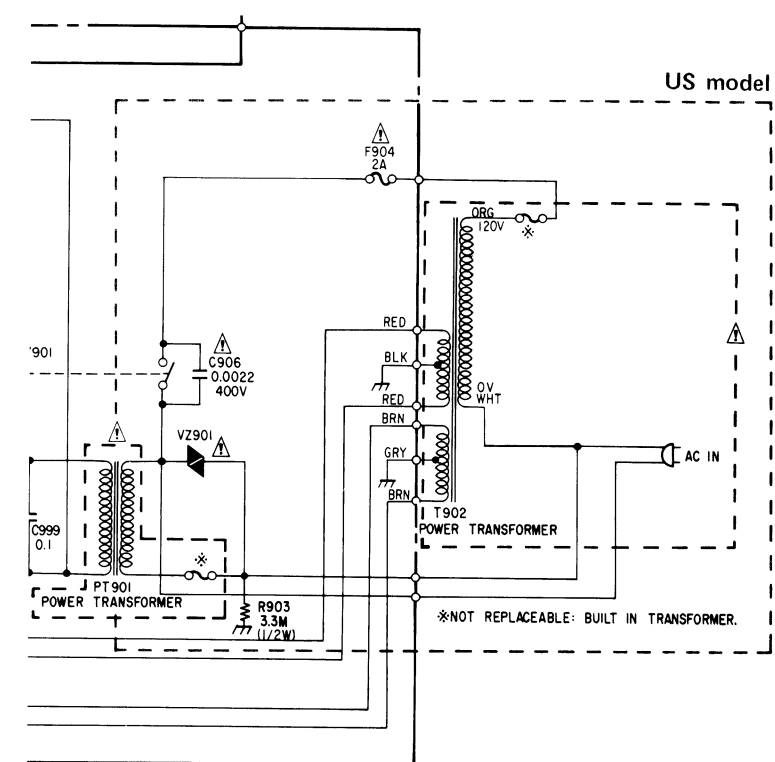
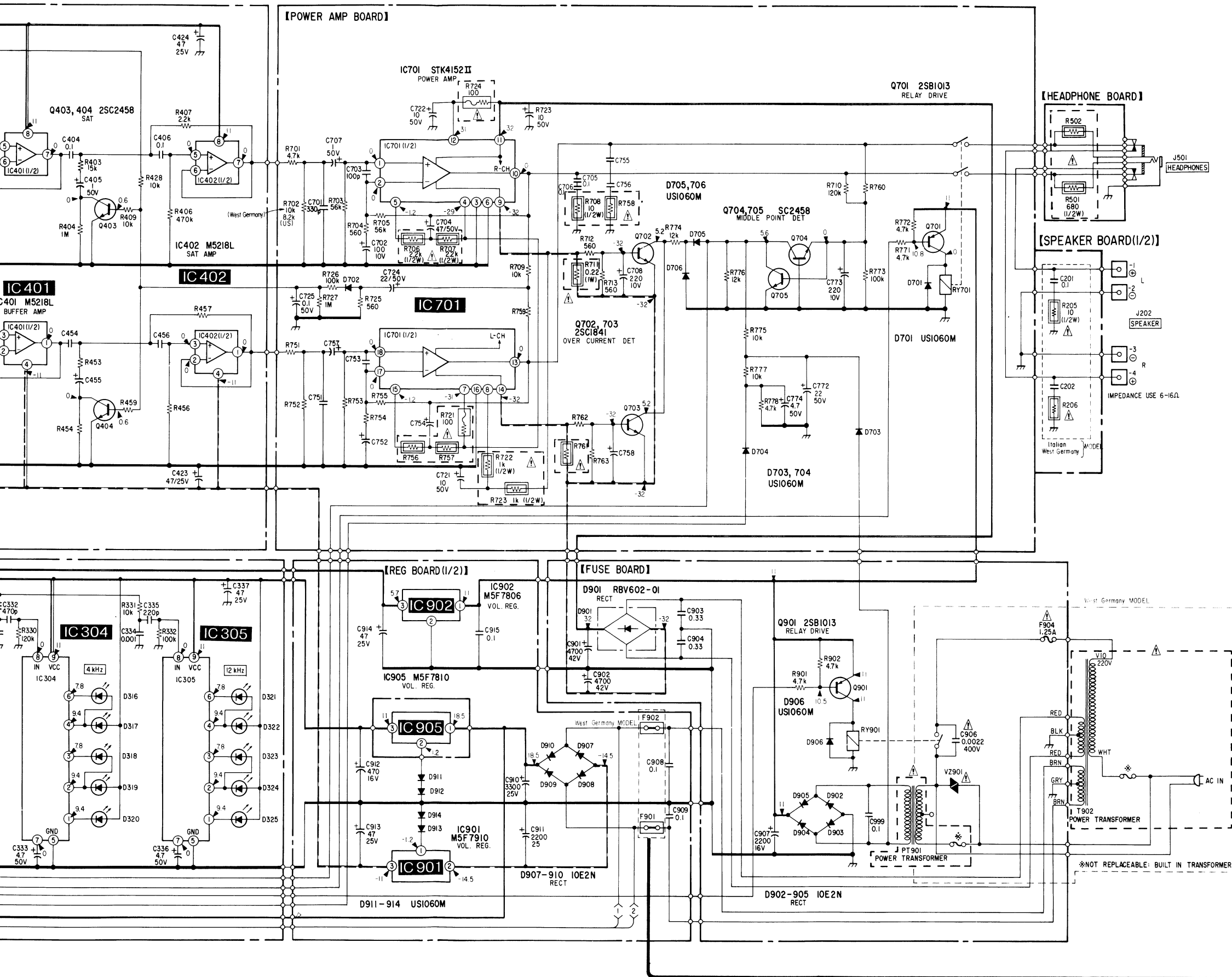


2-3. SCHEMATIC DIAGRAM

• See page 16 for notes.







SECTION 3
ELECTRICAL PARTS LIST

Note:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
-  : nonflammable resistor.
-  : fusible resistor.
- Voltage and waveforms are dc with respect to ground under no signal (detuned) conditions.
- Voltages are taken with a VOM (50 $\text{k}\Omega/\text{V}$). Voltage variations may be noted due to normal production tolerances.
-  : B+ Line.
-  : B- Line.
- Switches:

Ref. No.	Switch	Position
S301	POWER	OFF
S302	DBFB	OFF
S303	TAPE	OFF
S304	CD	OFF
S305	TUNER	OFF
S306	PHONO (AUX)	OFF

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF , PF: $\mu\mu\text{F}$.

RESISTORS
• All resistors are in ohms.
• F: nonflammable

COILS
• MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ , for example:
UA...: μA ..., UPA...: μPA ...,
UPC...: μPC , UPD...: μPD ...

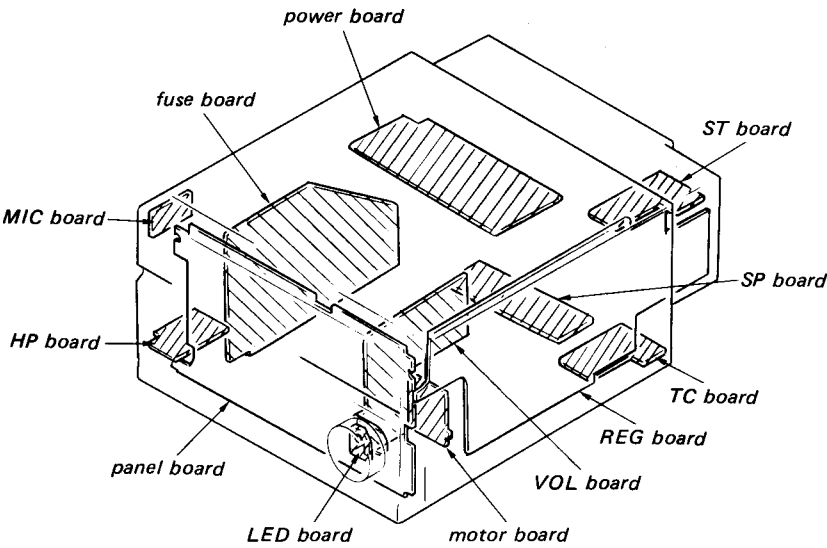
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
901	*1-625-875-11	PC BOARD, LED
902	*1-625-872-11	PC BOARD, MIC
903	*1-625-878-11	PC BOARD, HP
904	*A-4375-352-A	MOUNTED PCB, PANEL
905	*1-625-873-11	PC BOARD, VOL
906	*1-625-874-11	PC BOARD, MOTOR
907	*1-625-879-11	PC BOARD, FUSE
908	*A-4388-707-A	(West Germany)... MOUNTED PCB, POWER
	*A-4388-708-A	(US)... MOUNTED PCB, POWER
909	*1-625-877-11	PC BOARD, SP
910	*A-4410-662-A	MOUNTED PCB, ST
911	*A-4394-461-A	(US)... MOUNTED PCB, REG
	*A-4394-462-A	(West Germany)... MOUNTED PCB, REG
912	*1-625-869-11	PC BOARD, TC
913	 1-533-183-11	HOLDER, FUSE
914	 1-555-750-00	(West Germany)... CORD, POWER
	 1-559-819-00	(US)... CORD, POWER
915	*1-535-476-11	(West Germany)... TERMINAL
916	*1-625-870-11	PC BOARD, ST
BP901	*1-535-116-00	TERMINAL
BP902	*1-535-139-00	(US)... BASE POST 22mm 2P
BP903	1-535-139-00	BASE POST 22mm 2P
BP904	*1-508-830-12	H TYPE BASE POST
C152	1-101-005-00	CERAMIC 0.022MF 50V
C201	1-136-165-91	(West Germany)... FILM 0.1MF 5% 50V
C202	1-136-165-91	(West Germany)... FILM 0.1MF 5% 50V
C301	1-162-282-31	CERAMIC 100PF 10% 50V
C302	1-162-282-31	CERAMIC 100PF 10% 50V
C305	1-162-282-31	CERAMIC 100PF 10% 50V
C306	1-162-215-31	CERAMIC 47PF 5% 50V
C307	1-136-163-00	FILM 0.068MF 5% 50V
C308	1-136-156-00	FILM 0.018MF 5% 50V
C309	1-130-480-00	MYLAR 0.0056MF 5% 50V
C310	1-130-472-00	MYLAR 0.0012MF 5% 50V
C311	1-130-467-00	MYLAR 470PF 5% 50V
C312	1-124-902-00	ELECT 0.47MF 20% 50V
C313	1-124-463-00	ELECT 0.1MF 20% 50V
C314	1-136-162-00	FILM 0.056MF 5% 50V
C315	1-136-155-00	FILM 0.015MF 5% 50V
C316	1-130-479-00	MYLAR 0.0047MF 5% 50V
C321	1-162-215-31	CERAMIC 47PF 5% 50V
C322	1-124-463-00	ELECT 0.1MF 20% 50V
C323	1-161-494-00	CERAMIC 0.022MF 25V
C324	1-124-927-11	ELECT 4.7MF 20% 50V
C325	1-161-494-00	CERAMIC 0.022MF 25V
C326	1-161-377-00	CERAMIC 0.0047MF 30% 16V
C327	1-124-927-11	ELECT 4.7MF 20% 50V

Ref.No.	Part No.	Description
C328	1-161-379-00	CERAMIC 0.01MF 30% 16V
C329	1-161-375-00	CERAMIC 0.0022MF 30% 16V
C330	1-124-927-11	ELECT 4.7MF 20% 50V
C331	1-161-375-00	CERAMIC 0.0022MF 30% 16V
C332	1-162-290-31	CERAMIC 470PF 10% 50V
C333	1-124-927-11	ELECT 4.7MF 20% 50V
C334	1-162-294-31	CERAMIC 0.001MF 10% 50V
C335	1-162-286-31	CERAMIC 220PF 10% 50V
C336	1-124-927-11	ELECT 4.7MF 20% 50V
C337	1-124-477-11	ELECT 47MF 20% 25V
C338	1-124-477-11	ELECT 47MF 20% 25V
C340	1-161-379-00	CERAMIC 0.01MF 30% 16V
C341	1-161-379-00	CERAMIC 0.01MF 30% 16V
C342	1-162-294-31	CERAMIC 0.001MF 10% 50V
C343	1-124-463-00	ELECT 0.1MF 20% 50V
C344	1-124-477-11	ELECT 47MF 20% 25V
C345	1-162-294-31	CERAMIC 0.001MF 10% 50V
C346	1-124-902-00	ELECT 0.47MF 20% 50V
C347	1-162-288-31	CERAMIC 330PF 10% 50V
C348	1-161-379-00	CERAMIC 0.01MF 30% 16V
C349	1-124-477-11	ELECT 47MF 20% 25V
C351	1-162-282-31	CERAMIC 100PF 10% 50V
C352	1-162-282-31	CERAMIC 100PF 10% 50V
C355	1-162-282-31	CERAMIC 100PF 10% 50V
C356	1-162-215-31	CERAMIC 47PF 5% 50V
C357	1-136-163-00	FILM 0.068MF 5% 50V
C358	1-136-156-00	FILM 0.018MF 5% 50V
C359	1-130-480-00	MYLAR 0.0056MF 5% 50V
C360	1-130-472-00	MYLAR 0.0012MF 5% 50V
C361	1-130-467-00	MYLAR 470PF 5% 50V
C362	1-124-902-00	ELECT 0.47MF 20% 50V
C363	1-124-463-00	ELECT 0.1MF 20% 50V
C364	1-136-162-00	FILM 0.056MF 5% 50V
C365	1-136-155-00	FILM 0.015MF 5% 50V
C366	1-130-479-00	MYLAR 0.0047MF 5% 50V
C370	1-124-477-11	ELECT 47MF 20% 25V
C371	1-124-477-11	ELECT 47MF 20% 25V
C372	1-123-875-11	ELECT 10MF 20% 50V
C373	1-123-875-11	ELECT 10MF 20% 50V
C402	1-123-875-11	ELECT 10MF 20% 50V
C404	1-136-165-00	FILM 0.1MF 5% 50V
C405	1-124-499-11	ELECT 1MF 20% 50V
C406	1-136-165-00	FILM 0.1MF 5% 50V
C423	1-124-477-11	ELECT 47MF 20% 25V
C424	1-124-477-11	ELECT 47MF 20% 25V

Ref.No.	Part No.	Description
C425	1-124-443-00	ELECT 100MF 20% 10V
C426	1-124-443-00	ELECT 100MF 20% 10V
C427	1-124-443-00	ELECT 100MF 20% 10V
C452	1-123-875-11	ELECT 10MF 20% 50V
C454	1-136-165-00	FILM 0.1MF 5% 50V
C455	1-124-499-11	ELECT 1MF 20% 50V
C456	1-136-165-00	FILM 0.1MF 5% 50V
C601	1-162-282-31	CERAMIC 100PF 10% 50V
C602	1-162-282-31	CERAMIC 100PF 10% 50V
C603	1-162-288-31	(West Germany)... CERAMIC 330PF 10% 50V
C604	1-123-875-11	(West Germany)... ELECT 10MF 20% 50V
C605	1-130-485-00	(West Germany)... MYLAR 0.015MF 5% 50V
C606	1-130-480-00	(West Germany)... MYLAR 0.0056MF 5% 50V
C607	1-124-925-11	(West Germany)... ELECT 2.2MF 20% 50V
C608	1-123-875-11	(West Germany)... ELECT 10MF 20% 50V
C609	1-162-286-31	(West Germany)... CERAMIC 220PF 10% 50V
C610	1-124-499-11	ELECT 1MF 20% 50V
C621	1-124-477-11	(West Germany)... ELECT 47MF 20% 25V
C622	1-124-477-11	(West Germany)... ELECT 47MF 20% 25V
C623	1-124-477-11	ELECT 47MF 20% 25V
C624	1-124-925-11	ELECT 2.2MF 20% 50V
C625	1-124-477-11	ELECT 47MF 20% 25V
C626	1-124-499-11	ELECT 1MF 20% 50V
C627	1-124-902-00	ELECT 0.47MF 20% 50V
C651	1-162-282-31	CERAMIC 100PF 10% 50V
C652	1-162-282-31	CERAMIC 100PF 10% 50V
C653	1-162-288-31	(West Germany)... CERAMIC 330PF 10% 50V
C654	1-123-875-11	(West Germany)... ELECT 10MF 20% 50V
C655	1-130-485-00	(West Germany)... MYLAR 0.015MF 5% 50V
C656	1-130-480-00	(West Germany)... MYLAR 0.0056MF 5% 50V
C657	1-124-925-11	(West Germany)... ELECT 2.2MF 20% 50V
C658	1-123-875-11	(West Germany)... ELECT 10MF 20% 50V
C659	1-162-286-31	(West Germany)... CERAMIC 220PF 10% 50V
C660	1-124-499-11	ELECT 1MF 20% 50V
C671	1-124-499-11	ELECT 1MF 20% 50V
C672	1-123-875-11	ELECT 10MF 20% 50V
C673	1-161-379-00	CERAMIC 0.01MF 30% 16V
C674	1-123-875-11	ELECT 10MF 20% 50V
C675	1-124-477-11	ELECT 47MF 20% 25V
C701	1-162-288-31	CERAMIC 330PF 10% 50V
C702	1-124-443-00	ELECT 100MF 20% 10V
C703	1-162-282-31	CERAMIC 100PF 10% 50V
C704	1-124-910-11	ELECT 47MF 20% 50V
C705	1-136-165-00	FILM 0.1MF 5% 50V
C706	1-136-165-00	FILM 0.1MF 5% 50V
C707	1-124-499-11	ELECT 1MF 20% 50V
C708	1-124-444-00	ELECT 220MF 20% 10V
C721	1-123-875-11	ELECT 10MF 20% 50V
C722	1-124-122-11	ELECT 100MF 20% 50V
C723	1-123-875-11	ELECT 10MF 20% 50V
C724	1-124-908-11	ELECT 22MF 20% 50V
C725	1-124-463-00	ELECT 0.1MF 20% 50V
C751	1-162-288-31	CERAMIC 330PF 10% 50V
C752	1-124-443-00	ELECT 100MF 20% 10V
C753	1-162-282-31	CERAMIC 100PF 10% 50V
C754	1-124-910-11	ELECT 47MF 20% 50V
C755	1-136-165-00	FILM 0.1MF 5% 50V

• CIRCUIT BOARD LOCATION



ntified by
with mark
y.
rt number

30% 16V
30% 16V
20% 50V

30% 16V
10% 50V
20% 50V

10% 50V
10% 50V
20% 50V

20% 25V
20% 25V
30% 16V

30% 16V
10% 50V
20% 50V

20% 25V
10% 50V
20% 50V

10% 50V
30% 16V
20% 25V

10% 50V
10% 50V
10% 50V

5% 50V
5% 50V
5% 50V

5% 50V
5% 50V
5% 50V

20% 50V
20% 50V
5% 50V

20% 25V
20% 50V
20% 50V

20% 50V
5% 50V
20% 50V

5% 50V
20% 25V
20% 50V

Ref.No.	Part No.	Description				
C425	1-124-443-00	ELECT	100MF	20%	10V	
C426	1-124-443-00	ELECT	100MF	20%	10V	
C427	1-124-443-00	ELECT	100MF	20%	10V	
C452	1-123-875-11	ELECT	10MF	20%	50V	
C454	1-136-165-00	FILM	0.1MF	5%	50V	
C455	1-124-499-11	ELECT	1MF	20%	50V	
C456	1-136-165-00	FILM	0.1MF	5%	50V	
C601	1-162-282-31	CERAMIC	100PF	10%	50V	
C602	1-162-282-31	CERAMIC	100PF	10%	50V	
C603	1-162-288-31	(West Germany)... CERAMIC	330PF	10%	50V	
C604	1-123-875-11	(West Germany)... ELECT	10MF	20%	50V	
C605	1-130-485-00	(West Germany)... MYLAR	0.015MF	5%	50V	
C606	1-130-480-00	(West Germany)... MYLAR	0.0056MF	5%	50V	
C607	1-124-925-11	(West Germany)... ELECT	2.2MF	20%	50V	
C608	1-123-875-11	(West Germany)... ELECT	10MF	20%	50V	
C609	1-162-286-31	(West Germany)... CERAMIC	220PF	10%	50V	
C610	1-124-499-11	ELECT	1MF	20%	50V	
C621	1-124-477-11	(West Germany)... ELECT	47MF	20%	25V	
C622	1-124-477-11	(West Germany)... ELECT	47MF	20%	25V	
C623	1-124-477-11	ELECT	47MF	20%	25V	
C624	1-124-925-11	ELECT	2.2MF	20%	50V	
C625	1-124-477-11	ELECT	47MF	20%	25V	
C626	1-124-499-11	ELECT	1MF	20%	50V	
C627	1-124-902-00	ELECT	0.47MF	20%	50V	
C651	1-162-282-31	CERAMIC	100PF	10%	50V	
C652	1-162-282-31	CERAMIC	100PF	10%	50V	
C653	1-162-288-31	(West Germany)... CERAMIC	330PF	10%	50V	
C654	1-123-875-11	(West Germany)... ELECT	10MF	20%	50V	
C655	1-130-485-00	(West Germany)... MYLAR	0.015MF	5%	50V	
C656	1-130-480-00	(West Germany)... MYLAR	0.0056MF	5%	50V	
C657	1-124-925-11	(West Germany)... ELECT	2.2MF	20%	50V	
C658	1-123-875-11	(West Germany)... ELECT	10MF	20%	50V	
C659	1-162-286-31	(West Germany)... CERAMIC	220PF	10%	50V	
C660	1-124-499-11	ELECT	1MF	20%	50V	
C671	1-124-499-11	ELECT	1MF	20%	50V	
C672	1-123-875-11	ELECT	10MF	20%	50V	
C673	1-161-379-00	CERAMIC	0.01MF	30%	16V	
C674	1-123-875-11	ELECT	10MF	20%	50V	
C675	1-124-477-11	ELECT	47MF	20%	25V	
C701	1-162-288-31	CERAMIC	330PF	10%	50V	
C702	1-124-443-00	ELECT	100MF	20%	10V	
C703	1-162-282-31	CERAMIC	100PF	10%	50V	
C704	1-124-910-11	ELECT	47MF	20%	50V	
C705	1-136-165-00	FILM	0.1MF	5%	50V	
C706	1-136-165-00	FILM	0.1MF	5%	50V	
C707	1-124-499-11	ELECT	1MF	20%	50V	
C708	1-124-444-00	ELECT	220MF	20%	10V	
C721	1-123-875-11	ELECT	10MF	20%	50V	
C722	1-124-122-11	ELECT	100MF	20%	50V	
C723	1-123-875-11	ELECT	10MF	20%	50V	
C724	1-124-908-11	ELECT	22MF	20%	50V	
C725	1-124-463-00	ELECT	0.1MF	20%	50V	
C751	1-162-288-31	CERAMIC	330PF	10%	50V	
C752	1-124-443-00	ELECT	100MF	20%	10V	
C753	1-162-282-31	CERAMIC	100PF	10%	50V	
C754	1-124-910-11	ELECT	47MF	20%	50V	
C755	1-136-165-00	FILM	0.1MF	5%	50V	

Ref.No.	Part No.	Description				
C756	1-136-165-00	FILM	0.1MF	5%	50V	
C757	1-124-499-11	ELECT	1MF	20%	50V	
C758	1-124-444-00	ELECT	220MF	20%	10V	
C772	1-124-908-11	ELECT	22MF	20%	50V	
C773	1-124-444-00	ELECT	220MF	20%	10V	
C774	1-124-927-11	ELECT	4.7MF	20%	50V	
C901	1-126-224-11	ELECT	4700MF	20%	42V	
C902	1-126-224-11	ELECT	4700MF	20%	42V	
C903	1-136-171-00	FILM	0.33MF	5%	50V	
C904	1-136-171-00	FILM	0.33MF	5%	50V	
C906	1-161-742-00	CERAMIC	0.0022MF	20%	400V	
C907	1-124-556-11	ELECT	2200MF	20%	16V	
C908	1-136-165-00	FILM	0.1MF	5%	50V	
C909	1-136-165-00	FILM	0.1MF	5%	50V	
C910	1-124-636-00	ELECT	3300MF	20%	25V	
C911	1-124-563-11	ELECT	2200MF	20%	25V	
C912	1-126-103-11	ELECT	470MF	20%	16V	
C913	1-124-477-11	ELECT	47MF	20%	25V	
C914	1-124-477-11	ELECT	47MF	20%	25V	
C915	1-136-165-00	FILM	0.1MF	5%	50V	
C999	1-136-165-00	FILM	0.1MF	5%	50V	
CN101	*1-565-291-11	SOCKET, CONNECTOR 13P				
CN102	*1-564-337-00	PIN, CONNECTOR 3P				
CN151	*1-566-858-11	SOCKET, CONNECTOR 11P				
CN401	*1-564-505-11	PLUG, CONNECTOR 2P				
CN404	*1-565-041-11	PIN, CONNECTOR (PC BOARD) 5P				
CN551	*1-564-495-11	PIN, CONNECTOR 2P				
CN601	*1-564-507-11	PLUG, CONNECTOR 4P				
CN602	*1-564-508-11	PLUG, CONNECTOR 5P				
CN603	*1-564-513-11	PLUG, CONNECTOR 10P				
CN702	*1-564-522-11	PLUG, CONNECTOR 7P				
CN703	*1-564-520-11	PLUG, CONNECTOR 5P				
CN901	1-506-979-11	CONNECTOR, BOARD TO BOARD 13P				
CN902	1-564-610-21	CONNECTOR, BOARD TO BOARD				
CN904	*1-564-342-61	PIN, CONNECTOR 8P				
CN905	*1-564-501-11	PIN, CONNECTOR 8P				
CN906	*1-564-502-11	PIN, CONNECTOR 10P				
D301	8-719-310-63	DIODE SEL4725C				
D302	8-719-310-63	DIODE SEL4725C				
D303	8-719-310-63	DIODE SEL4725C				
D304	8-719-310-63	DIODE SEL4725C				
D305	8-719-310-63	DIODE SEL4725C				
D306	8-719-310-63	DIODE SEL4725C				
D307	8-719-310-63	DIODE SEL4725C				
D308	8-719-310-63	DIODE SEL4725C				
D309	8-719-310-63	DIODE SEL4725C				
D310	8-719-310-63	DIODE SEL4725C				
D311	8-719-310-63	DIODE SEL4725C				
D312	8-719-310-63	DIODE SEL4725C				
D313	8-719-310-63	DIODE SEL4725C				
D314	8-719-310-63	DIODE SEL4725C				
D315	8-719-310-63	DIODE SEL4725C				
D316	8-719-310-63	DIODE SEL4725C				
D317	8-719-310-63	DIODE SEL4725C				
D318	8-719-310-63	DIODE SEL4725C				
D319	8-719-310-63	DIODE SEL4725C				
D320	8-719-310-63	DIODE SEL4725C				
D321	8-719-310-63	DIODE SEL4725C				

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				
D322	8-719-310-63	DIODE SEL4725C				
D323	8-719-310-63	DIODE SEL4725C				
D324	8-719-310-63	DIODE SEL4725C				
D325	8-719-310-63	DIODE SEL4725C				
D326	8-719-301-60	DIODE SEL2910A-C				
D327	8-719-310-81	DIODE SEL1722K-C				
D328	8-719-310-81	DIODE SEL1722K-C				
D329	8-719-310-81	DIODE SEL1722K-C				
D330	8-719-310-81	DIODE SEL1722K-C				
D331	8-719-301-38	DIODE SEL2210S-C				
D332	8-719-000-26	DIODE US1060M				
D401	8-719-301-43	DIODE SEL2410E-C				
D601	8-719-000-26	DIODE US1060M				
D602	8-719-000-26	DIODE US1060M				
D603	8-719-000-26	DIODE US1060M				
D604	8-719-000-26	DIODE US1060M				
D605	8-719-000-26	DIODE US1060M				
D606	8-719-000-26	DIODE US1060M				
D607	8-719-000-26	DIODE US1060M				
D701	8-719-000-26	DIODE US1060M				
D702	8-719-000-26	DIODE US1060M				
D703	8-719-000-26	DIODE US1060M				
D704	8-719-000-26	DIODE US1060M				
D705	8-719-000-26	DIODE US1060M				
D706	8-719-000-26	DIODE US1060M				
D901	8-719-302-38	DIODE RBV-602-01				
D902	8-719-200-77	DIODE 10E2N				
D903	8-719-200-77	DIODE 10E2N				
D904	8-719-200-77	DIODE 10E2N				
D905	8-719-200-77	DIODE 10E2N				
D906	8-719-000-26	DIODE US1060M				
D907	8-719-200-77	DIODE 10E2N				
D908	8-719-200-77	DIODE 10E2N				
D909	8-719-200-77	DIODE 10E2N				
D910	8-719-200-77	DIODE 10E2N				
D911	8-719-000-26	DIODE US1060M				
D912	8-719-000-26	DIODE US1060M				
D913	8-719-000-26	DIODE US1060M				
D914	8-719-000-26	DIODE US1060M				
F901	1-532-846-21	(West Germany)... LINK, IC				
F901	Δ 1-532-783-21	(US)... FUSE, MICRO (SECONDARY) 5A				
F902	1-532-846-21	(West Germany)... LINK, IC				
F902	Δ 1-532-783-21	(US)... FUSE, MICRO (SECONDARY) 5A				
F903	1-532-841-21	(West Germany)... LINK, IC				
F903	Δ 1-532-778-21	(US)... FUSE, MICRO (SECONDARY) 1.6A				
F904	Δ 1-532-285-00	(West Germany)... FUSE, TIME-LAG 1.25A				
F904	Δ 1-532-743-11	(US)... FUSE, GLASS TUBE 2A				
IC301	8-759-913-80	IC IR2E31				
IC302	8-759-913-80	IC IR2E31				
IC303	8-759-913-80	IC IR2E31				
IC304	8-759-913-80	IC IR2E31				
IC305	8-759-913-80	IC IR2E31				
IC306	8-759-600-02	IC M5218L				
IC307	8-759-602-04	IC M5226P				
IC308	8-759-602-04	IC M5226P				
IC309	8-759-600-02	IC M5218L				
IC401	8-759-600-02	IC M5218L				
IC402	8-759-600-02	IC M5218L				
IC403	8-759-820-62	IC LB1639				
IC601	8-759-821-00	(US)... IC LC6528C-3699				
IC601	8-759-820-50	(West Germany)... IC LC6528C-3649				
IC602	8-759-800-33	IC LC7815H				
IC603	8-759-600-02	(West Germany)... IC M5218L				

Ref.No.	Part No.	Description				
IC701	Δ 8-749-941-52	IC STK41521I				
IC901	8-759-604-50	IC M5F7910				
IC902	8-759-604-84	IC M5F7806				
IC905	8-759-604-32	IC M5F7810				
J201	1-564-980-11	PIN, CONNECTOR 4P				
J202	1-536-705-00	TERMINAL BOARD (SP)				
J501	1-562-837-11	JACK (HEADPHONES)				
J551	1-562-981-21	JACK (MIC)				
J601	1-507-908-11	JACK, PIN 4P				
L601	1-410-564-21	INDUCTOR 100UH				
PT901	Δ 1-449-288-11	(US)..... TRANSFORMER, POWER				
PT901	Δ 1-449-194-11	(West Germany)... TRANSFORMER, POWER				
Q151	8-729-115-15	TRANSISTOR BN1A4M				
Q201	8-729-600-94	TRANSISTOR 2SK381-C				
Q301	8-729-117-54	TRANSISTOR 2SA1175				
Q401	8-729-600-27	TRANSISTOR 2SC634SP				
Q402	8-729-600-27	TRANSISTOR 2SC634SP				
Q403	8-729-600-27	TRANSISTOR 2SC634SP				
Q404	8-729-600-27	TRANSISTOR 2SC634SP				
Q405	8-729-115-79	TRANSISTOR BA1A4M				
Q601	8-729-600-27	TRANSISTOR 2SC634SP				
Q701	8-729-801-83	TRANSISTOR 2SB1013				
Q702	8-729-108-05	TRANSISTOR 2SC1841-PA				
Q703	8-729-108-05	TRANSISTOR 2SC1841-PA				
Q704	8-729-600-27	TRANSISTOR 2SC634SP				
Q705	8-729-600-27	TRANSISTOR 2SC634SP				
Q901	8-729-801-83	TRANSISTOR 2SB1013				
R151	1-249-425-11	CARBON 4.7K	5%	1/4W		
R152	1-249-429-11	CARBON 10K	5%	1/4W		
R201	1-249-429-11	CARBON 10K	5%	1/4W		
R202	1-249-433-11	CARBON 22K	5%	1/4W		
R203	1-249-417-11	CARBON 1K	5%	1/4W		
R205	Δ 1-247-727-81	(West Germany)... CARBON 10	5%	1/2W	F	
R206	Δ 1-247-727-81	(West Germany)... CARBON 10	5%	1/2W	F	
R301	1-249-427-11	CARBON 6.8K	5%	1/4W		
R302	1-249-435-11	CARBON 33K	5%	1/4W		
R303	1-249-425-11	CARBON 4.7K	5%	1/4W		
R304	1-249-426-11	CARBON 5.6K	5%	1/4W		
R307	1-249-438-11	CARBON 56K	5%	1/4W		
R321	1-249-430-11	CARBON 12K	5%	1/4W		
R322	1-249-430-11	CARBON 12K	5%	1/4W		
R323	1-249-441-11	CARBON 100K	5%	1/4W		
R324	1-249-431-11	CARBON 15K	5%	1/4W		
R325	1-247-881-00	CARBON 120K	5%	1/4W		
R326	1-249-430-11	CARBON 12K	5%	1/4W		
R327	1-249-441-11	CARBON 100K	5%	1/4W		
R328	1-249-431-11	CARBON 15K	5%	1/4W		
R330	1-247-881-00	CARBON 120K	5%	1/4W		
R331	1-249-429-11	CARBON 10K	5%	1/4W		
R332	1-249-441-11	CARBON 100K	5%	1/4W		
R341	1-249-429-11	CARBON 10K	5%	1/4W		
R342	1-249-418-11	CARBON 1.2K	5%	1/4W		
R343	1-249-429-11	CARBON 10K	5%	1/4W		
R344	1-249-399-11	CARBON 33	5%	1/4W		
R345	1-249-423-11	CARBON 3.3K	5%	1/4W		
R348	1-249-429-11	CARBON 10K	5%	1/4W		
R351	1-249-427-11	CARBON 6.8K	5%	1/4W		

		Ref.No.	Part No.	Description
5%	50V	D322	8-719-310-63	DIODE SEL4725C
20%	50V	D323	8-719-310-63	DIODE SEL4725C
20%	10V	D324	8-719-310-63	DIODE SEL4725C
20%	50V			
		D325	8-719-310-63	DIODE SEL4725C
20%	10V	D326	8-719-301-60	DIODE SEL2910A-C
20%	50V	D327	8-719-310-81	DIODE SEL1722K-C
20%	42V			
		D328	8-719-310-81	DIODE SEL1722K-C
20%	42V	D329	8-719-310-81	DIODE SEL1722K-C
5%	50V	D330	8-719-310-81	DIODE SEL1722K-C
5%	50V			
		D331	8-719-301-38	DIODE SEL2210S-C
20%	400V	D332	8-719-000-26	DIODE US1060M
20%	16V	D401	8-719-301-43	DIODE SEL2410E-C
5%	50V			
		D601	8-719-000-26	DIODE US1060M
5%	50V	D602	8-719-000-26	DIODE US1060M
20%	25V	D603	8-719-000-26	DIODE US1060M
20%	25V			
		D604	8-719-000-26	DIODE US1060M
20%	16V	D605	8-719-000-26	DIODE US1060M
20%	25V	D606	8-719-000-26	DIODE US1060M
20%	25V			
		D607	8-719-000-26	DIODE US1060M
5%	50V	D701	8-719-000-26	DIODE US1060M
5%	50V	D702	8-719-000-26	DIODE US1060M
		D703	8-719-000-26	DIODE US1060M
		D704	8-719-000-26	DIODE US1060M
		D705	8-719-000-26	DIODE US1060M
5P		D706	8-719-000-26	DIODE US1060M
		D901	8-719-302-38	DIODE RBV-602-01
		D902	8-719-200-77	DIODE 10E2N
		D903	8-719-200-77	DIODE 10E2N
		D904	8-719-200-77	DIODE 10E2N
		D905	8-719-200-77	DIODE 10E2N
		D906	8-719-000-26	DIODE US1060M
		D907	8-719-200-77	DIODE 10E2N
13P		D908	8-719-200-77	DIODE 10E2N
		D909	8-719-200-77	DIODE 10E2N
		D910	8-719-200-77	DIODE 10E2N
		D911	8-719-000-26	DIODE US1060M
		D912	8-719-000-26	DIODE US1060M
		D913	8-719-000-26	DIODE US1060M
		D914	8-719-000-26	DIODE US1060M
		F901	1-532-846-21	(West Germany)... LINK, IC
		F901	△,1-532-783-21	(US)... FUSE, MICRO (SECONDARY) 5A
		F902	1-532-846-21	(West Germany)... LINK, IC
		F902	△,1-532-783-21	(US)... FUSE, MICRO (SECONDARY) 5A
		F903	1-532-841-21	(West Germany)... LINK, IC
		F903	△,1-532-778-21	(US)... FUSE, MICRO (SECONDARY) 1.6A
		F904	△,1-532-285-00	(West Germany)... FUSE, TIME-LAG 1.25A
		F904	△,1-532-743-11	(US)... FUSE, GLASS TUBE 2A
		IC301	8-759-913-80	IC IR2E31
		IC302	8-759-913-80	IC IR2E31
		IC303	8-759-913-80	IC IR2E31
		IC304	8-759-913-80	IC IR2E31
		IC305	8-759-913-80	IC IR2E31
		IC306	8-759-600-02	IC M5218L
		IC307	8-759-602-04	IC M5226P
		IC308	8-759-602-04	IC M5226P
		IC309	8-759-600-02	IC M5218L
		IC401	8-759-600-02	IC M5218L
		IC402	8-759-600-02	IC M5218L
		IC403	8-759-820-62	IC LB1639
		IC601	8-759-821-00	(US)... IC LC6528C-3699
		IC601	8-759-820-50	(West Germany)... IC LC6528C-3649
		IC602	8-759-800-33	IC LC7815H
		IC603	8-759-600-02	(West Germany)... IC M5218L

△ or dotted
line with
mark △
are critical
for safety.
Replace
only with
part number
specified.

Ref.No.	Part No.	Description
IC701	△,8-749-941-52	IC STK4152II
IC901	8-759-604-50	IC M5F7910
IC902	8-759-604-84	IC M5F7806
IC905	8-759-604-32	IC M5F7810
J201	1-564-980-11	PIN, CONNECTOR 4P
J202	1-536-705-00	TERMINAL BOARD (SP)
J501	1-562-837-11	JACK (HEADPHONES)
J551	1-562-981-21	JACK (MIC)
J601	1-507-908-11	JACK, PIN 4P
L601	1-410-564-21	INDUCTOR 100UH
PT901	△,1-449-288-11	(US)... TRANSFORMER, POWER
PT901	△,1-449-194-11	(West Germany)... TRANSFORMER, POWER
Q151	8-729-115-15	TRANSISTOR BN1A4M
Q201	8-729-600-94	TRANSISTOR 2SK381-C
Q301	8-729-117-54	TRANSISTOR 2SA1175
Q401	8-729-600-27	TRANSISTOR 2SC634SP
Q402	8-729-600-27	TRANSISTOR 2SC634SP
Q403	8-729-600-27	TRANSISTOR 2SC634SP
Q404	8-729-600-27	TRANSISTOR 2SC634SP
Q405	8-729-115-79	TRANSISTOR BA1A4M
Q601	8-729-600-27	TRANSISTOR 2SC634SP
Q701	8-729-801-83	TRANSISTOR 2SB1013
Q702	8-729-108-05	TRANSISTOR 2SC1841-PA
Q703	8-729-108-05	TRANSISTOR 2SC1841-PA
Q704	8-729-600-27	TRANSISTOR 2SC634SP
Q705	8-729-600-27	TRANSISTOR 2SC634SP
Q901	8-729-801-83	TRANSISTOR 2SB1013
R151	1-249-425-11	CARBON 4.7K 5% 1/4W
R152	1-249-429-11	CARBON 10K 5% 1/4W
R201	1-249-429-11	CARBON 10K 5% 1/4W
R202	1-249-433-11	CARBON 22K 5% 1/4W
R203	1-249-417-11	CARBON 1K 5% 1/4W
R205	△,1-247-727-81	(West Germany)... CARBON 10 5% 1/2W F
R206	△,1-247-727-81	(West Germany)... CARBON 10 5% 1/2W F
R301	1-249-427-11	CARBON 6.8K 5% 1/4W
R302	1-249-435-11	CARBON 33K 5% 1/4W
R303	1-249-425-11	CARBON 4.7K 5% 1/4W
R304	1-249-426-11	CARBON 5.6K 5% 1/4W
R307	1-249-438-11	CARBON 56K 5% 1/4W
R321	1-249-430-11	CARBON 12K 5% 1/4W
R322	1-249-430-11	CARBON 12K 5% 1/4W
R323	1-249-441-11	CARBON 100K 5% 1/4W
R324	1-249-431-11	CARBON 15K 5% 1/4W
R325	1-247-881-00	CARBON 120K 5% 1/4W
R326	1-249-430-11	CARBON 12K 5% 1/4W
R327	1-249-441-11	CARBON 100K 5% 1/4W
R328	1-249-431-11	CARBON 15K 5% 1/4W
R330	1-247-881-00	CARBON 120K 5% 1/4W
R331	1-249-429-11	CARBON 10K 5% 1/4W
R332	1-249-441-11	CARBON 100K 5% 1/4W
R341	1-249-429-11	CARBON 10K 5% 1/4W
R342	1-249-418-11	CARBON 1.2K 5% 1/4W
R343	1-249-429-11	CARBON 10K 5% 1/4W
R344	1-249-399-11	CARBON 33 5% 1/4W
R345	1-249-423-11	CARBON 3.3K 5% 1/4W
R348	1-249-429-11	CARBON 10K 5% 1/4W
R351	1-249-427-11	CARBON 6.8K 5% 1/4W

Note: The components identified by mark △ or dotted
line with mark △ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description
R352	1-249-435-11	CARBON 33K 5% 1/4W
R353	1-249-425-11	CARBON 4.7K 5% 1/4W
R354	1-249-426-11	CARBON 5.6K 5% 1/4W
R357	1-249-438-11	CARBON 56K 5% 1/4W
R372	1-249-428-11	CARBON 8.2K 5% 1/4W
R373	1-249-426-11	CARBON 5.6K 5% 1/4W
R379	1-249-413-11	CARBON 470 5% 1/4W
R380	1-249-414-11	CARBON 560 5% 1/4W
R381	1-249-413-11	CARBON 470 5% 1/4W
R383	1-249-425-11	CARBON 4.7K 5% 1/4W
R384	1-249-425-11	CARBON 4.7K 5% 1/4W
R390	1-249-429-11	CARBON 10K 5% 1/4W
R392	1-249-412-11	CARBON 390 5% 1/4W
R401	1-249-441-11	CARBON 100K 5% 1/4W
R402	1-249-429-11	CARBON 10K 5% 1/4W
R403	1-249-431-11	CARBON 15K 5% 1/4W
R404	1-247-903-00	CARBON 1M 5% 1/4W
R406	1-247-895-00	CARBON 470K 5% 1/4W
R407	1-249-421-11	CARBON 2.2K 5% 1/4W
R409	1-249-429-11	CARBON 10K 5% 1/4W
R426	1-249-417-11	CARBON 1K 5% 1/4W
R427	1-249-415-11	CARBON 680 5% 1/4W
R428	1-249-429-11	CARBON 10K 5% 1/4W
R431	1-249-405-11	CARBON 100 5% 1/4W
R432	1-249-405-11	CARBON 100 5% 1/4W
R451	1-249-441-11	CARBON 100K 5% 1/4W
R452	1-249-429-11	CARBON 10K 5% 1/4W
R453	1-249-431-11	CARBON 15K 5% 1/4W
R454	1-247-903-00	CARBON 1M 5% 1/4W
R456	1-247-895-00	CARBON 470K 5% 1/4W
R457	1-249-421-11	CARBON 2.2K 5% 1/4W
R459	1-249-429-11	CARBON 10K 5% 1/4W
R501	△,1-247-750-81	CARBON 680 5% 1/2W F
R502	△,1-247-750-81	CARBON 680 5% 1/2W F
R601	1-249-418-11	CARBON 1.2K 5% 1/4W
R602	1-247-891-00	CARBON 330K 5% 1/4W
R603	1-249-432-11	CARBON 18K 5% 1/4W
R604	1-249-418-11	CARBON 1.2K 5% 1/4W
R605	1-249-418-11	(West Germany)... CARBON 1.2K 5% 1/4W
R606	1-249-438-11	(West Germany)... CARBON 56K 5% 1/4W
R607	1-249-418-11	(West Germany)... CARBON 1.2K 5% 1/4W
R608	1-249-437-11	(West Germany)... CARBON 47K 5% 1/4W
R609	1-215-487-00	(West Germany)... CARBON 560K 5% 1/4W
R610	1-247-891-00	CARBON 330K 5% 1/4W
R611	1-249-423-11	(West Germany)... CARBON 3.3K 5% 1/4W
R611	1-249-428-11	(US)... CARBON 8.2K 5% 1/4W
R612	1-247-891-00	CARBON 330K 5% 1/4W
R613	1-249-417-11	CARBON 1K 5% 1/4W
R614	1-247-891-00	CARBON 330K 5% 1/4W
R615	1-249-429-11	CARBON 10K 5% 1/4W
R616	1-249-425-11	CARBON 4.7K 5% 1/4W
R621	1-249-421-11	CARBON 2.2K 5% 1/4W
R622	1-247-887-00	CARBON 220K 5% 1/4W
R623	1-249-429-11	CARBON 10K 5% 1/4W
R624	1-249-429-11	CARBON 10K 5% 1/4W

Ref.No.	Part No.	Description						
R625	1-249-429-11	CARBON	10K	5%		1/4W		
R626	1-249-429-11	CARBON	10K	5%		1/4W		
R627	1-249-433-11	CARBON	22K	5%		1/4W		
R628	1-249-433-11	CARBON	22K	5%		1/4W		
R629	1-249-433-11	CARBON	22K	5%		1/4W		
R630	1-249-433-11	CARBON	22K	5%		1/4W		
R651	1-249-418-11	CARBON	1.2K	5%		1/4W		
R652	1-247-891-00	CARBON	330K	5%		1/4W		
R653	1-249-432-11	CARBON	18K	5%		1/4W		
R654	1-249-418-11	CARBON	1.2K	5%		1/4W		
R655	1-249-418-11	(West Germany)... CARBON	1.2K	5%		1/4W		
R656	1-249-438-11	(West Germany)... CARBON	56K	5%		1/4W		
R657	1-249-418-11	(West Germany)... CARBON	1.2K	5%		1/4W		
R658	1-249-437-11	(West Germany)... CARBON	47K	5%		1/4W		
R659	1-215-487-00	(West Germany)... CARBON	560K	5%		1/4W		
R660	1-247-891-00	CARBON	330K	5%		1/4W		
R661	1-249-423-11	(West Germany)... CARBON	3.3K	5%		1/4W		
R661	1-249-428-11	(US)..... CARBON	8.2K	5%		1/4W		
R662	1-247-891-00	CARBON	330K	5%		1/4W		
R663	1-249-417-11	CARBON	1K	5%		1/4W		
R664	1-247-891-00	CARBON	330K	5%		1/4W		
R665	1-249-429-11	CARBON	10K	5%		1/4W		
R666	1-249-425-11	CARBON	4.7K	5%		1/4W		
R670	1-249-428-11	CARBON	8.2K	5%		1/4W		
R671	1-249-426-11	CARBON	5.6K	5%		1/4W		
R672	1-249-419-11	CARBON	1.5K	5%		1/4W		
R673	1-249-429-11	CARBON	10K	5%		1/4W		
R674	1-249-417-11	CARBON	1K	5%		1/4W		
R675	1-249-441-11	CARBON	100K	5%		1/4W		
R676	1-249-417-11	CARBON	1K	5%		1/4W		
R677	1-249-417-11	CARBON	1K	5%		1/4W		
R678	1-249-418-11	CARBON	1.2K	5%		1/4W		
R679	1-249-417-11	CARBON	1K	5%		1/4W		
R680	1-249-417-11	CARBON	1K	5%		1/4W		
R681	1-249-425-11	CARBON	4.7K	5%		1/4W		
R682	1-249-425-11	CARBON	4.7K	5%		1/4W		
R683	1-249-406-11	CARBON	120	5%		1/4W		
R684	1-249-406-11	CARBON	120	5%		1/4W		
R685	1-249-423-11	CARBON	3.3K	5%		1/4W		
R686	1-249-423-11	CARBON	3.3K	5%		1/4W		
R687	1-249-423-11	CARBON	3.3K	5%		1/4W		
R688	1-249-423-11	CARBON	3.3K	5%		1/4W		
R701	1-249-425-11	CARBON	4.7K	5%		1/4W		
R702	1-249-429-11	(West Germany)... CARBON	10K	5%		1/4W		
R702	1-249-428-11	(US)..... CARBON	8.2K	5%		1/4W		
R703	1-249-438-11	CARBON	56K	5%		1/4W		
R704	1-249-414-11	CARBON	560	5%		1/4W		
R705	1-249-438-11	CARBON	56K	5%		1/4W		
R706	Δ, 1-247-756-11	CARBON	2.2K	5%		1/2W	F	
R707	Δ, 1-247-756-11	CARBON	2.2K	5%		1/2W	F	
R708	Δ, 1-247-727-81	CARBON	10	5%		1/2W	F	
R709	1-249-429-11	CARBON	10K	5%		1/4W		
R710	1-247-881-00	CARBON	120K	5%		1/4W		
R711	Δ, 1-217-151-00	RES, METAL PLATE	0.22				F	
R712	1-249-414-11	CARBON	560	5%		1/4W		
R713	1-249-414-11	CARBON	560	5%		1/4W		

Ref.No.	Part No.	Description				
R721	△ 1-2 12-881-11	FUSIBLE	100	5%	1/4W	F
R722	△ 1-2 47-752-11	CARBON	1K	5%	1/2W	F
R723	△ 1-2 47-752-11	CARBON	1K	5%	1/2W	F
R724	△ 1-2 12-881-11	FUSIBLE	100	5%	1/4W	F
R725	1-2 49-414-11	CARBON	560	5%	1/4W	
R726	1-2 49-441-11	CARBON	100K	5%	1/4W	
R727	1-2 47-903-00	CARBON	1M	5%	1/4W	
R751	1-2 49-425-11	CARBON	4.7K	5%	1/4W	
R752	1-2 49-429-11	(West Germany)... CARBON	10K	5%	1/4W	
R752	1-2 49-428-11	(US)... CARBON	8.2K	5%	1/4W	
R753	1-2 49-438-11	CARBON	56K	5%	1/4W	
R754	1-2 49-414-11	CARBON	560	5%	1/4W	
R755	1-2 49-438-11	CARBON	56K	5%	1/4W	
R756	△ 1-2 47-756-11	CARBON	2.2K	5%	1/2W	F
R757	△ 1-2 47-756-11	CARBON	2.2K	5%	1/2W	F
R758	△ 1-2 47-727-81	CARBON	10	5%	1/2W	F
R759	1-2 49-429-11	CARBON	10K	5%	1/4W	
R760	1-2 47-881-00	CARBON	120K	5%	1/4W	
R761	△ 1-2 17-151-00	RES, METAL PLATE 0.22				F
R762	1-2 49-414-11	CARBON	560	5%	1/4W	
R763	1-2 49-414-11	CARBON	560	5%	1/4W	
R771	1-2 49-425-11	CARBON	4.7K	5%	1/4W	
R772	1-2 49-425-11	CARBON	4.7K	5%	1/4W	
R773	1-2 49-441-11	CARBON	100K	5%	1/4W	
R774	1-2 49-430-11	CARBON	12K	5%	1/4W	
R775	1-2 49-429-11	CARBON	10K	5%	1/4W	
R776	1-2 49-430-11	CARBON	12K	5%	1/4W	
R777	1-2 49-429-11	CARBON	10K	5%	1/4W	
R778	1-2 49-425-11	CARBON	4.7K	5%	1/4W	
R901	1-2 49-425-11	CARBON	4.7K	5%	1/4W	
R902	1-2 49-425-11	CARBON	4.7K	5%	1/4W	
R903	1-2 02-725-00	(US)... RES, SOLID 3.3M	10%	1/2W		
RV301	1-2 38-069-11	RES, VAR, CARBON 50K (MIC LEVEL)				
RV302	1-2 38-064-11	RES, VAR, SLIDE 100K (BALANCE)				
RV303	1-2 38-065-11	RES, VAR, SLIDE 250K/250K (100Hz)				
RV304	1-2 38-065-11	RES, VAR, SLIDE 250K/250K (400Hz)				
RV305	1-2 38-065-11	RES, VAR, SLIDE 250K/250K (1kHz)				
RV306	1-2 38-065-11	RES, VAR, SLIDE 250K/250K (4kHz)				
RV307	1-2 38-065-11	RES, VAR, SLIDE 250K/250K (12kHz)				
RV401	1-2 38-061-11	RES, VAR CARBON 50K/50K (VOLUME)				
RY701	1-5 15-616-11	RELAY				
RY901	1-5 15-516-00	(West Germany)... RELAY				
RY901	1-5 15-601-11	(US)... RELAY				

Ref.No.	Part No.	Description
S301	1-554-303-21	SWITCH, KEY BOARD (POWER)
S302	1-554-419-00	SWITCH, PUSH (1 KEY)(DBFB)
S303	1-571-436-11	SWITCH, KEYBOARD (TAPE)
S304	1-571-436-11	SWITCH, KEYBOARD (CD)
S305	1-571-436-11	SWITCH, KEYBOARD (TUNER)
S306	1-571-436-11	SWITCH, KEYBOARD (PHONO) (AUX)
T902	△ 1-449-193-11	(West Germany)... TRANSFORMER, POWER
T902	△ 1-449-289-11	(US)... TRANSFORMER, POWER
VZ901	△ 1-807-180-31	VARISTOR SNR-14A471U
X601	1-567-819-11	VIBRATOR, CERAMIC

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

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